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ABSTRACT

This course of study for the food service employee is one of a series available for use by teacher- coordinators and students in Grade 11 and 12 home economics cooperative education programs. Based on job analysis interviews with food service personnel, it was prepared by teachers and Instructional Materials Center staff, field-tested, and revised prior to publication. Designed for use by teachers in course planning or for independent study by students, the course outline relates tasks to general objectives and competencies needed to perform effectively on the job. The content contains four main sections: Instructional Materials for Students, Answer Sheets for Instructional Materials Study Questions, Unit Tests, and Answer Keys for Unit Tests. Unit topics are: (1) What is a Food Service Employee? (2) Sanitation, (3) Safety Precautions, (4) Commercial Kitchen Equipment, (5) Techniques of Food Preparation, (6) Food Production, (7) Fundamentals of Bus Service, (8) Table Service Techniques, and (9) Procedures for Receiving and Storing Foods. Units provide information, questions, assignments, and student exercises. (AW)

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FOOD SERVICE EMPLOYEE

Materials Prepared
by

Home Economics Instructional Materials Center
Texas Tech University

Issued
by

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Department of
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in
cooperation
with

Texas Education Agency
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Austin, Texas

September, 1969

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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VT 009 961

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Necessary X
Desirable ______ (Check Which)

Describe A list of required books and pamphlets is included in the Course of Study. Sources and addresses vary for the publications.
Source (agency)
(address)

COURSE OF STUDY
FOR
FOOD SERVICE EMPLOYEE

This Course of Study is one of a series available to assist teacher-coordinators in promoting and/or teaching home economics cooperative education programs. It was used experimentally in twenty-four schools in Texas during 1968. This publication represents a revision based on the information gained from both teacher-coordinators and students in these twenty-four schools through a variety of evaluation instruments. Other Courses of Study in the series are:

Child Care Aide
Clothing Assistant
Dietitian Aide
Home Furnishings Aide
Housekeeping Management Assistant

A Course of Study consists of (1) an overview and job description, (2) a job analysis, (3) a course outline, (4) instructional materials for student use, (5) unit tests, and (6) a list of references required for use with the instructional materials.

The Course of Study for Food Service Employee is based on the job analysis included in this set of materials. The job analysis was developed from interviews with employers and/or employees in food service operations. The proposed course outline for teacher use (which grew out of the job analysis) served as a guide for writing the instructional materials for student use. During the process of developing the course outline, advisory committee meetings were held to review and edit the working materials. Experienced home economics cooperative education teacher-coordinators and subject matter specialists aided in writing the student materials.

The job analysis may be used in interviews with employers and/or employees to survey the tasks performed by entry level employees in this occupation in a particular community. Results of the interviews could then be used as a basis for writing the training plans for each student.

The proposed course outline relates the tasks to the general objectives and competencies needed by students to perform effectively on the job. The competencies listed as "abilities" are to be gained primarily from on-the-job training while those listed as "understandings" are to be gained from classroom experiences.

The student instructional materials included as Section A in this Course of Study have been written to provide part of the classroom instruction and are designed to give students an increased understanding of the tasks they perform on the job. This section is also bound separately for student use.

Since students in a given class are employed in a variety of occupations, the instructional materials have been developed in such a manner that they may be used for individual study with a minimum of assistance from the teacher-coordinator. The materials are designed so students may begin with any unit. It is not necessary for them to go through the units in a particular order. They may wish to begin with the units most closely related to their jobs and then go back and study the rest of the information.

Each topic of the instructional materials begins with the task to which the topic is related and a statement of behavioral objectives. For some topics, information sheets are provided and for other topics reading assignments in related texts and pamphlets are made. Study questions and/or assignments follow the information sheet for each topic. The study questions provide an opportunity for the student to check his understanding of the information presented. The teacher-coordinator may wish to check the answers to the questions, or she may suggest that the student check his own work and then turn the work in to her.

Answers to study questions are included in Section B of the Course of Study, but they are not in the separately bound student copy of instructional materials. The special assignments, included with some topics, are also repeated on the answer sheets to remind the teacher-coordinator to check the student's progress in completing them.

Unit tests are provided in Section C and answer keys in Section D of the teacher's copy of the Course of Study. These sections are not included in the separately bound student copy of instructional materials.

Reference materials which are essential for use with the Course of Study are listed on page E-1. Copies of the books and pamphlets listed must be secured and made available for student use. An effort has been made to select references which will adequately cover the materials and provide up-to-date information related to the job.

The sources listed in the complete bibliography following the Course Units were used in developing the entire Course of Study. These materials are not required references for student use.

ACKNOWLEDGMENTS

This Course of Study for Food Service Employees, prepared by the Home Economics Instructional Materials Center at Texas Tech University, is the result of the combined efforts and ideas of many people, namely:

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TABLE OF CONTENTS

Page

DESCRIPTION OF THE HOME ECONOMICS INSTRUCTIONAL MATERIALS CENTER iii

COURSE OF STUDY FOR FOOD SERVICE EMPLOYEE (INTRODUCTION TO THE TEACHER) v

ACKNOWLEDGEMENTS vii

OVERVIEW 1

FOOD SERVICE EMPLOYEE JOB ANALYSIS 7

PROPOSED COURSE OUTLINE 13

COURSE UNITS 19

JOB ANALYSIS AT THREE COMPETENCY LEVELS 41

BIBLIOGRAPHY 43

INSTRUCTIONAL MATERIALS FOR STUDENTS (SECTION A)

WHAT IS A COURSE OF STUDY? (INTRODUCTION TO STUDENTS) A-1

UNIT I. WHAT IS A FOOD SERVICE EMPLOYEE?

I-1. Job Opportunities in Food Service A-3
I-2. Employee Qualifications A-7

UNIT II. SANITATION

II-1. Food Contamination and Poisoning A-13
II-2. Sanitation Codes A-23
II-3. Procedures for Dishwashing A-25
II-4. Cleaning Versus Sanitizing A-27
II-5. Care of Furniture, Floors, and Surface Areas A-29

UNIT III. SAFETY PRECAUTIONS A-33

UNIT IV. COMMERCIAL KITCHEN EQUIPMENT

IV-1. Blender A-41
IV-2. Meat Slicer A-43
IV-3. Mixer A-53

Page

IV-4. Food Cutter or Chopper A-73
IV-5. Individual Toaster A-79
IV-6. Conveyor Toaster A-81
IV-7. Refrigerator A-83
IV-8. Bain-Marie A-87
IV-9. Cold Food Server A-89
IV-10. Steam Table A-91
IV-11. Electric and Gas Ranges, Hot Tops, Broilers, Stack Ovens, and Compartment Steamers A-95
IV-12. Vegetable Peeler A-103
IV-13. Garbage Disposal A-107
IV-14. Knives A-109
IV-15. Hand Utensils A-115
IV-16. Dippers A-119
IV-17. Storage of Equipment A-123

UNIT V. TECHNIQUES OF FOOD PREPARATION

V-1. Quality Food Preparation A-125
V-2. Terminology Used in Food Preparation . . . A-129
V-3. Standard Weights and Measurements Used in Food Preparation A-143
V-4. Techniques of Portioning Foods A-149
V-5. Work Simplification and Work Schedules . . A-153

UNIT VI. FOOD PRODUCTION

VI-1. Customer Satisfaction A-157
VI-2. Preparation of Coffee and Tea A-159
VI-3. Bakery Ingredients A-167
VI-4. Quick Breads A-171
VI-5. Yeast Breads A-175
VI-6. Pastries A-179
VI-7. Desserts A-183
VI-8. Salads A-187
VI-9. Sandwiches A-191
VI-10. Vegetable Cookery A-193
VI-11. Meats and Entree Foods A-197
VI-12. Deep-Frying A-199
VI-13. Convenience Foods A-201

UNIT VII. FUNDAMENTALS OF BUS SERVICE A-205

UNIT VIII. TABLE SERVICE TECHNIQUES

VIII-1. Types of Service (Table, Cafeteria, Fountain) A-209
VIII-2. Hints on Meeting the Public A-215
VIII-3. Procedures for Setting Tables A-217
VIII-4. Hints for Writing and Placing Orders . . . A-219

Page

VIII-5. Serving the Food A-221
VIII-6. Presenting the Check A-225
VIII-7. Table Arrangements for Parties A-227

UNIT IX. PROCEDURES FOR RECEIVING AND STORING FOODS

IX-1. Receiving Records A-229
IX-2. Storage of Food and Supplies A-235

ANSWER SHEETS FOR INSTRUCTIONAL MATERIALS STUDY QUESTIONS (SECTION B)

UNIT I. WHAT IS A FOOD SERVICE EMPLOYEE?

I-1. Job Opportunities in Food Service B-1
I-2. Employee Qualifications B-3

UNIT II. SANITATION

II-1. Food Contamination and Poisoning B-5
II-2. Sanitation Codes B-7
II-3. Procedures for Dishwashing B-9
II-4. Cleaning Versus Sanitizing B-11
II-5. Care of Furniture, Floors, and Surface Areas B-13

UNIT III. SAFETY PRECAUTIONS B-15

UNIT IV. COMMERCIAL KITCHEN EQUIPMENT

IV-1. Blender B-17
IV-2. Meat Slicer B-19
IV-3. Mixer B-21
IV-4. Food Cutter or Chopper B-23
IV-5. Individual Toaster B-25
IV-6. Conveyor Toaster B-27
IV-7. Refrigerator B-29
IV-8. Bain-Marie B-31
IV-9. Cold Food Server B-33
IV-10. Steam Table B-35
IV-11. Electric and Gas Ranges, Hot Tops, Broilers, Stack Ovens, and Compartment Steamers B-37
IV-12. Vegetable Peeler B-39
IV-13. Garbage Disposal B-41
IV-14. Knives B-43
IV-15. Hand Utensils B-45
IV-16. Dippers B-47
IV-17. Storage of Equipment B-49

Page

UNIT V. TECHNIQUES OF FOOD PREPARATION

V-1. Quality Food Preparation B-51
V-2. Terminology Used in Food Preparation--TERMS B-53
V-2. Terminology Used in Food Preparation--ABBREVIATIONS B-55
V-2. Terminology Used in Food Preparation--SUBSTITUTIONS B-57
V-2. Terminology Used in Food Preparation--EQUIVALENTS B-59
V-3. Standard Weights and Measurements Used in Food Preparation B-61
V-4. Techniques of Portioning Foods B-63
V-5. Work Simplification and Work Schedules . . B-65

UNIT VI. FOOD PRODUCTION

VI-1. Customer Satisfaction B-67
VI-2. Preparation of Coffee and Tea B-69
VI-3. Bakery Ingredients B-71
VI-4. Quick Breads B-73
VI-5. Yeast Breads B-75
VI-6. Pastries B-79
VI-7. Desserts B-83
VI-8. Salads B-87
VI-9. Sandwiches B-89
VI-10. Vegetable Cookery B-91
VI-11. Meats and Entree Foods B-93
VI-12. Deep-Frying B-95
VI-13. Convenience Foods B-97

UNIT VII. FUNDAMENTALS OF BUS SERVICE B-99

UNIT VIII. TABLE SERVICE TECHNIQUES

VIII-1. Types of Service (Table, Cafeteria, Fountain) B-101
VIII-2. Hints on Meeting the Public B-103
VIII-3. Procedures for Setting Tables B-105
VIII-4. Hints for Writing and Placing Orders . . . B-107
VIII-5. Serving the Food B-109
VIII-6. Presenting the Check B-111
VIII-7. Table Arrangements for Parties B-113

UNIT IX. PROCEDURES FOR RECEIVING AND STORING FOOD

IX-1. Receiving Records B-115
IX-2. Storage of Food and Supplies B-117

Page

UNIT TESTS (SECTION C)

UNIT I. WHAT IS A FOOD SERVICE EMPLOYEE? C-1

UNIT II. SANITATION C-3

UNIT III. SAFETY PRECAUTIONS C-7

UNIT IV. COMMERCIAL KITCHEN EQUIPMENT
IV-Part I, 1-3 . . . . C-9
IV-Part II, 4-17 . . . . C-13

UNIT V. TECHNIQUES OF FOOD PREPARATION C-19

UNIT VI. FOOD PRODUCTION
VI-Part I, 1-7 . . . . C-23
VI-Part II, 8-13 . . . . C-27

UNIT VII. FUNDAMENTALS OF BUS SERVICE C-31

UNIT VIII. TABLE SERVICE TECHNIQUES C-33

UNIT IX. PROCEDURES FOR RECEIVING AND STORING FOOD C-37

ANSWER KEYS FOR UNIT TESTS (SECTION D)

UNIT I. WHAT IS A FOOD SERVICE EMPLOYEE? D-1

UNIT II. SANITATION D-3

UNIT III. SAFETY PRECAUTIONS D-5

UNIT IV. COMMERICAL KITCHEN EQUIPMENT
IV-Part I, 1-3 . . . . D-7
IV-Part II, 4-17 . . . . D-9

UNIT V. TECHNIQUES OF FOOD PREPARATION D-11

UNIT VI. FOOD PREPARATION
VI-Part I, 1-7 . . . . D-13
VI-Part II, 8-13 . . . . D-15

UNIT VII. FUNDAMENTALS OF BUS SERVICE D-17

UNIT VIII. TABLE SERVICE TECHNIQUES D-19

UNIT IX. PROCEDURES FOR RECEIVING AND STORING FOOD D-21

REFERENCES REQUIRED FOR USE WITH INSTRUCTIONAL MATERIALS E-1

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Lubbock, Texas

OVERVIEW

FOOD SERVICE EMPLOYEE

A trainee in food service is expected to develop skills in any job associated with the kitchen, dishroom, or serving area. His responsibilities are defined by the type and size of the food service operation with which he is employed.

The home economics cooperative education student may be employed in the food service operation of a restaurant, cafeteria, drive-in, specialty house, hospital, nursing home, or for an industrial or educational facility. He should become versatile in the performance of any food service task. Upon completion of his training, he should be qualified for employment in a variety of types of food service operations.

The major functional activities in a food service business are: managing, supervising, purchasing, planning, receiving, inspecting, storing, producing, serving, dishwashing, maintaining cleanliness, and keeping records.

The following chart shows a distribution of the kinds of jobs usually associated with a food service business. The positions and job tasks are assigned according to need and, in some cases, one person will assume the responsibilities of several job tasks.

SAMPLE ORGANIZATIONAL CHART

Manager

Assistants or Department Heads

Food Production	Comptroller	Sanitation & Maintenance		Service
Cook*	Bookkeeper**	Engineer		Host/Hostess
Cook's Helper	Cashier	Sanitation	Maintenance	Waiter/Waitress
	Purchasing Agent**	Dishwasher		Busboy/Busgirl
	Storeroom Clerk	Potwasher		
		Pantry Girl		(Cafeteria)
				Dining Room Attendants
				Line Server

* May be classified according to type of food or method of preparation as fry cook, pastry cook

** These duties are often assumed by management

Home economics cooperative education programs for food service employees are structured to prepare youth for employment in any food service business. All trainees are expected to fulfill certain competencies, such as the ability to read, write, and work relatively simple mathmatical problems. Positive personal-social traits, which lead to the successful performance of the responsibilities related to the position, are advantageous to the trainee.

Qualities leading to advancement are neatness, good health, a command of the English language, tactfulness, good judgment, pleasing personality, adaptability, and an ability to memorize quickly. Specific competencies related to the food service business are knowledge and ability in handling foods and ability to use and care for equipment, appliances, and utensils that are necessary in the preparation and serving of foods.

A food service employee has numerous demands as he performs his duties. The preparing and serving of food must be regulated so that each course immediately follows the one preceding it. The trainee, therefore, needs to know how long it takes to complete any course on the menu, and he must be able to plan intelligently for the preparation and service of several different meals simultaneously. He must understand and use the proper techniques for all occasions and, through employee meetings and training, become aware of common practices and customs as they relate to his job. He may be required to work at a rapid pace for short periods of time, while paying attention to numerous details.

The food service industry needs trained personnel and offers many possibilities for employment and advancement, thus the development of home economics cooperative education programs are justified. An unskilled person who begins at the job entry level as busboy and kitchen helper can advance as quickly as he is able to learn the assigned tasks. Knowing how each position fits into the total objectives of the business provides an excellent basis for the development of the trainee.

The jobs associated with the food industry have been analyzed for this course of study through research and interviews with food service operators of several kinds of businesses. The following tentative job analyses are the result of those interviews.

At the entry level, the food service employee who works primarily in and/or between the serving area and the dishwashing section of the kitchen will remove dishes, silverware, glasses, and linens from the tables; place removed items systematically on trays or carts; transfer the loaded trays or carts to the kitchen or dishroom; deposit the items in specified containers or areas; clean the surfaces of the tables and chairs; and maintain a supply of linens, table settings, and other necessary items convenient to the serving area.

General housekeeping duties include daily mopping or vacuuming of floors; thorough cleaning of the surfaces of the tables, chairs, and serving stations; and replacement of all the equipment and supplies that are required for the assigned area. Any spilled food or liquids must be wiped up promptly.

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The entry level employee may be expected to assist the waiter by resetting the tables with silverware, glasses, linens, and filled condiment containers; carrying heavy trays of food; and serving extra items to the customers as requested. Other duties may include making the coffee and iced tea, filling the beverage boxes, checking out needed supplies from the storeroom, filling condiment and ice containers, and arranging tables for special groups.

The overall responsibility of the beginning food service employee is to maintain orderliness and cleanliness in the serving area. Bus service is an important job because cleanliness is essential to the successful operation of any food service establishment.

The service host or hostess (waiter or waitress) works primarily in the serving area of the food business. He or she takes orders for food, places orders for each course in proper sequence in the kitchen, carries the food from the kitchen to the tables, serves the food using prescribed techniques, itemizes and totals checks for all the foods ordered, and presents the checks to the customers.

He is expected to make his customers feel welcome and comfortable, to maintain an awareness of the needs of the customers, to fulfill promptly any reasonable requests made, and to maintain the neatness of the table at all times during the serving period. He may be expected to present the menu and offer suggestions upon request.

Other duties may include preparing menu folders, arranging tables for special groups, making beverages, assembling orders, filling condiment containers, receiving payment from the customer to take to the cashier, and returning any change that may be due the customer.

Housekeeping duties may include clearing the tables and disposing of the used items in proper locations and containers, cleaning off the tables and chairs, and attending to the general overall appearance of the assigned area.

The most essential responsibilities are to serve customers efficiently and safely. If the service host accepts his responsibilities and performs them in a courteous and friendly manner, he will promote the sucessful operation of the food service business where he is employed.

Other entry level jobs in a food service operation may involve working as a cook's helper, kitchen helper, dishwasher, or potwasher depending upon the type and size of the operation.

As a cook's helper, the tasks may include washing, peeling, and/or chopping fruits and vegetables; watching and/or stirring foods to prevent burning while cooking; weighing or measuring staple items for the cook; preparing beverages; adding finishing touches to prepared foods; assisting in assembling orders placed by the waiter; and verifying the orders after they have been assembled. He may devote his entire time to one type of food preparation or work in a variety of preparation centers as needed.

If the main job is concerned with sanitation and maintenance, then the tasks include keeping the kitchen and equipment clean. He is expected to properly clean and sanitize work tables, butcher blocks, pots, pans, steam tables, and steam table trays and to sweep and mop the floors. A knowledge of the care of equipment is essential for this job.

Other tasks may include washing and polishing silverware; washing glasses and dishes; carrying trays of food or materials to specified locations; removing and/or replacing equipment and supplies as needed in assigned areas; checking out needed supplies from the storeroom; and filling staple containers.

The employee's responsibilities are to perform the simpler tasks that are essential in the preparation of foods and to maintain sanitary and orderly conditions for equipment and surroundings.

The cook's main duties involve the preparation of foods; however, his tasks depend upon the type and size of the food operation with which he is employed. The variety of tasks are designated by (1) the kinds of foods being prepared, (2) the methods of preparation, (3) the cook's rank in the kitchen, or (4) the meal being prepared.

In small establishments, the cook's job includes less specialization and a greater variety of tasks. He either prepares or supervises the preparation of all items on the day's menu for serving at prescribed times of the day.

If the cook is employed in a large food business, his job tasks may be limited to the preparation of specific kinds of food, such as vegetables, fish, or desserts. In another situation, his tasks may be determined by the method of preparation, such as broiling, baking, or frying.

Some employers hire a cook for a particular meal and limit his task to the preparation of specific foods identified with that meal. Other employers may determine the job tasks according to the rank of the employee, such as first or second cook. Each type of cook will have designated tasks as defined by the need and policy of the food service business.

The general responsibilities of each cook include preparing foods for serving in ways that are attractive, nutritious, and safe, following sanitary and efficient techniques.

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Summary:

A student participating in a food service training program should be prepared to assume a variety of tasks. His progress is limited only by his interests, abilities, and training since the food industry offers numerous possibilities for employment and advancement.

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FOOD SERVICE EMPLOYEE JOB ANALYSIS

(Used in interviews with food service operators)

NAME OF BUSINESS________________ DATE______________________________

INTERVIEWEE______________________ INTERVIEWER__________________

DIRECTIONS: Please check the responsibilities or tasks that a food service employee frequently performs. In the column marked "Comments," make any notations you feel will clarify procedures used in this food service operation.

TASKS	COMMENTS
_____ 1. Accepts instruction and guidance from supervisory personnel in performing duties assigned as food service employee	
_____ 2. Handles food, beverages, equipment, utensils, and table settings in ways to prevent contamination	
_____ 3. Follows federal, state, city, and county sanitation codes	
_____ 4. Washes and inspects glassware, silverware, and china for cleanliness and spotlessness	
_____ 5. Washes utensils and cooking equipment	

TASKS	COMMENTS
____ 6. Cleans and sanitizes surface areas in the kitchen and in the serving area	
____ 7. Wipes off table tops and chair seats	
____ 8. Washes or polishes assigned furniture daily	
____ 9. Mops or vacuums floors	
____ 10. Uses precautions necessary to avoid accidents in food preparation area	
____ 11. Wipes up any spilled food or liquid as soon as possible	
____ 12. Knows the location and use of all fire extinguishers	
____ 13. Selects and correctly uses proper piece of equipment for a specified job	
____ 14. Selects proper hand utensils for particular food preparation tasks	
____ 15. Follows appropriate procedures when using cutlery	
____ 16. Helps keep equipment in its proper place before and after mealtime	

TASKS	COMMENTS
_____ 17. Reads recipes, knows terminology, and follows directions	
_____ 18. Measures and weighs foods according to specifications listed in standard recipes	
_____ 19. Assembles food orders and places them on plates and trays	
_____ 20. Verifies orders by scanning filled plates to insure specified portion and quality of food	
_____ 21. Plans work schedule so foods are ready at serving time	
_____ 22. Makes beverages, such as coffee and tea, and places them in serving locations	
_____ 23. Follows standard procedures for preparing a variety of foods--breads, pastries, salads, desserts, vegetables	
_____ 24. Evaluates quality of food prepared	
_____ 25. Replenishes serving station during serving hours	

TASKS	COMMENTS
_____ 26. Fills condiment comtainers, arranges dishes and silverware in appropriate places	
_____ 27. Removes soiled items from tables and stations	
_____ 28. Carries loaded trays between kitchen and serving area	
_____ 29. Sorts, counts, and stores utensils at designated places	
_____ 30. Serves food in manner prescribed at place of employment	
_____ 31. Welcomes customers in an appropriate manner	
_____ 32. Sets assigned tables at the beginning of the work day and maintains tables during service hours	
_____ 33. Fills water glasses and distributes menu	
_____ 34. Offers suggestions or answers questions about the menu	
_____ 35. Writes orders following prescribed methods	
_____ 36. Places orders in kitchen	

TASKS	COMMENTS
_____ 37. Prepares menu folders	
_____ 38. Serves food to customer	
_____ 39. Checks the needs of the customers periodically and supplies them with needed items	
_____ 40. Clears items from table as the customer is finished with them	
_____ 41. Itemizes and totals the price of each order	
_____ 42. Presents check to customers	
_____ 43. Helps arrange tables for special parties	
_____ 44. Follows standard procedures for receiving food and supplies	
_____ 45. Stores food and supplies in appropriate facilities and at proper temperature	
_____ 46. Assists with inventories of food and supplies	

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Lubbock, Texas

PROPOSED COURSE OUTLINE FOR FOOD SERVICE EMPLOYEE BASED ON FINDINGS OF JOB ANALYSIS

TASKS PERFORMED AS DETERMINED BY JOB ANALYSIS	COURSE OUTLINE	GENERAL OBJECTIVES The trainee will:
Accepts instruction and guidance from supervisory personnel in performing duties assigned as food service employee	UNIT I - What Is A Food Service Employee?	Become acquainted with the various tasks expected of employees in different areas of food service Evaluate self in terms of qualities which contribute to success as a food service employee
Handles food, beverages, equipment, utensils, and table settings in ways to prevent contamination Follows federal, state, city, and county sanitation codes Washes and inspects glassware, silverware, and china for cleanliness and spotlessness Washes utensils and cooking equipment	UNIT II - Sanitation	Identify ways disease may be spread through careless handling of food and equipment Recognize the principles of sanitation which apply to the food service industry Recognize necessity of appropriate housekeeping and maintenance practices Evaluate personal practices in relation to principles of sanitation

TASKS PERFORMED AS DETERMINED BY JOB ANALYSIS	COURSE OUTLINE	GENERAL OBJECTIVES The trainee will:
Cleans and sanitizes surface areas in the kitchen and in the serving area Wipes off table tops and chair seats Washes or polishes assigned furniture daily Mops or vacuums floors		Discriminate between cleaning and sanitizing and know when to use each
Uses precautions necessary to avoid accidents in food preparation area Wipes up any spilled food or liquid as soon as possible Knows the location and use of all fire extinguishers	UNIT III - Safety Precautions	Recognize the principles of safety which relate to the handling and storing of food, equipment, and utensils Evaluate self in terms of safety practices followed on the job
Selects and correctly uses proper piece of equipment for a specified job Selects proper hand utensils for particular food preparation tasks Follows appropriate procedures when using cutlery	UNIT IV - Commercial Kitchen Equipment	Recognize the kinds and functions of equipment used in commercial food service establishments Outline correct procedures for use of commercial kitchen equipment

TASKS PERFORMED AS DETERMINED BY JOB ANALYSIS	COURSE OUTLINE	GENERAL OBJECTIVES The trainee will:
Helps keep equipment in its proper place before and after mealtime		Select the appropriate piece of equipment for a particular task Describe safety measures to observe when using knives Identify guidelines to follow in the storage of equipment
Reads recipes, knows terminology, and follows directions Measures and weighs foods according to specifications listed in standard recipes Assembles food orders and places them on plates and trays Verifies orders by scanning filled plates to insure specified portion and quality of food Plans work schedule so foods are ready at serving time	UNIT V - Techniques of Food Preparation	Interpret terms, abbreviations, equivalents, and substitutions used in recipes Plan work so as to meet scheduled deadlines Adapt techniques of work simplification to tasks performed on the job

TASKS PERFORMED AS DETERMINED BY JOB ANALYSIS	COURSE OUTLINE	GENERAL OBJECTIVES The trainee will:
Makes beverages, such as coffee and tea, and places them in serving locations Follows standard procedures for preparing a variety of foods--breads, pastries, salads, desserts, vegetables Evaluates quality of food prepared	UNIT VI - Food Production	Describe procedures to be used in the preparation of quality food products Identify standards for quality food products
Replenishes serving station during serving hours Fills condiment containers, arranges dishes and silverware in appropriate places Removes soiled items from tables and stations Carries loaded trays between kitchen and serving area Sorts, counts, and stores utensils at designated places	UNIT VII - Fundamentals of Bus Service	Recognize the contribution bus service makes to the operation of the food service establishment Identify tasks involved in bus service
Serves food in manner prescribed at place of employment Welcomes customers in an appropriate manner	UNIT VIII - Table Service Techniques	Define the various types of service used in the food service industry Describe procedures for setting the table for the different types of service

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TASKS PERFORMED AS DETERMINED BY JOB ANALYSIS	COURSE OUTLINE	GENERAL OBJECTIVES The trainee will:
Sets assigned tables at the beginning of the work day and maintains tables during service hours		Analyze techniques used in taking orders, serving food, and clearing tables
Fills water glasses and distributes menu		Recognize the necessity for alertness to customer needs
Offers suggestions or answers questions about the menu		Practice techniques which make the customer feel welcome and comfortable
Writes orders following prescribed methods		
Places orders in kitchen		
Prepares menu folders		
Serves food to customer		
Checks the needs of the customers periodically and supplies them with needed items		
Clears items from table as the customer is finished with them		
Itemizes and totals the price of each order		

TASKS PERFORMED AS DETERMINED BY JOB ANALYSIS	COURSE OUTLINE	GENERAL OBJECTIVES
Presents check to customers Helps arrange tables for special parties		
Follows standard procedures for receiving food and supplies Stores food and supplies in appropriate facilities and at proper temperature Assists with inventories of food and supplies	UNIT IX - Procedures for Receiving and Storing Foods	Identify procedures used in compiling orders, receiving, and storing food and supplies

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COURSE UNIT I

WHAT IS A FOOD SERVICE EMPLOYEE?

OBJECTIVES: Become acquainted with the various tasks expected of employees in different areas of food service

Evaluate self in terms of qualities which contribute to success as a food service employee

TASKS	COMPETENCIES NEEDED TO PERFORM TASKS IN TERMS OF	
	ABILITY TO:	UNDERSTANDING OF:
Accepts instruction and guidance from supervisory personnel in performing duties assigned as food service employee	Relate job responsibilities to personal qualities and to the type of food service establishment	Personal qualities and characteristics needed by a successful food service employee Job opportunities in the food service industry Tasks assumed by food service employees Attitudes which lead to good interpersonal relationships (employee-employer, employee-employee)

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COURSE UNIT II

SANITATION

OBJECTIVES:

- Identify ways disease may be spread through careless handling of food and equipment
- Recognize the principles of sanitation which apply to the food service industry
- Recognize necessity of appropriate housekeeping and maintenance practices
- Evaluate personal practices in relation to principles of sanitation
- Discriminate between cleaning and sanitizing and know when to use each

TASKS	COMPETENCIES NEEDED TO PERFORM TASKS IN TERMS OF	
	ABILITY TO:	UNDERSTANDING OF:
Handles food, beverages, equipment, utensils, and table settings in ways to prevent contamination	Use judgment in handling food, equipment, and supplies in a sanitary manner	Types of food-borne illnesses Ways disease and food-borne illnesses may be spread through careless handling of contaminated utensils, equipment, and food Procedures to follow to prevent food-borne illnesses

UNIT II (Continued)

TASKS	ABILITY TO:	UNDERSTANDING OF:
		Necessity for evaluation of personal habits related to cleanliness and sanitation
Follows federal, state, city, and county sanitation codes	Observe sanitation codes	Federal and state sanitary requirements for food service operation
Washes and inspects glassware, silverware, and china for cleanliness and spotlessness	Wash dishes and utensils using efficient, sanitary techniques and appropriate materials and equipment	Appropriate procedures for dishwashing
Washes utensils and cooking equipment		Proper use and care of dishwashing equipment
Cleans and sanitizes surface areas in kitchen and in the serving area	Perform housekeeping tasks assigned in an efficient and sanitary manner	Importance of maintaining all surfaces in a sanitary manner
		Difference between cleaning and sanitizing
		Procedures for cleaning and sanitizing surfaces and equipment
Wipes off table tops and chair seats	Select the correct materials for cleaning tables and chairs	Procedures for cleaning tables and chairs
Washes or polishes assigned furniture daily		

UNIT II (Continued)

TASKS	ABILITY TO:	UNDERSTANDING OF:
Mops or vacuums floors	Care for type of floor finish at place of employment	Methods to use for cleaning a variety of types of floor finishes and coverings Procedure to follow for mopping floors

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COURSE UNIT III

SAFETY PRECAUTIONS

OBJECTIVES: Recognize the principles of safety which relate to the handling and storing of food, equipment, and utensils

Evaluate self in terms of safety practices followed on the job

TASKS	COMPETENCIES NEEDED TO PERFORM TASKS IN TERMS OF	
	ABILITY TO:	UNDERSTANDING OF:
Uses precautions necessary to avoid accidents in food preparation area	Detect safety hazards	Conditions which may lead to accidents Precautions to follow in the food preparation area Necessity of being alert to hazardous situations Appropriate methods to use for lifting and carrying objects
Wipes up any spilled food or liquid as soon as possible	Apply safety precautions so as to prevent accidents	Hazards associated with spilled food

UNIT III (Continued)

TASKS	ABILITY TO:	UNDERSTANDING OF:
Knows the location and the use of all fire extinguishers	Use different kinds of fire extinguishers	Types of fire extinguishers to use for different types of fires

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COURSE UNIT IV

COMMERCIAL KITCHEN EQUIPMENT

OBJECTIVES:

- Recognize the kinds and functions of equipment used in commercial food service establishments
- Outline correct procedures for use of commercial kitchen equipment
- Select the appropriate piece of equipment for a particular task
- Describe safety measures to observe when using knives
- Identify guidelines to follow in the storage of equipment

TASKS	COMPETENCIES NEEDED TO PERFORM TASKS IN TERMS OF	
	ABILITY TO:	UNDERSTANDING OF:
Selects and correctly uses proper piece of equipment for specified job 1. blender 2. meat slicer 3. mixer 4. food cutter or chopper 5. individual toaster 6. conveyor toaster 7. refrigerator	Use food service equipment correctly	Procedures for using commercial kitchen equipment Factors related to the care of commercial kitchen equipment Appropriate methods of handling equipment to avoid injury and damage

TASKS	ABILITY TO:	UNDERSTANDING OF:
8. bain-marie 9. cold food server 10. steam table 11. electric and gas ranges, hot tops, broilers, stack ovens, and compartment steamers 12. vegetable peeler 13. garbage disposal		
Selects proper hand utensils for particular food preparation tasks	Select and use appropriate utensils for food preparation	The appropriate utensil to select for a particular task
14. knives 15. hand utensils 16. dippers		
Follows appropriate procedures when using cutlery	Sharpen and care for cutlery	Procedures for use and maintenance of cutlery
Helps keep equipment in its proper place before and after mealtime	Store equipment efficiently	Principles of storage for efficient operation of food preparation area

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COURSE UNIT V

TECHNIQUES OF FOOD PREPARATION

OBJECTIVES: Interpret terms, abbreviations, equivalents, and substitutions used in recipes

Plan work so as to meet scheduled deadlines

Adapt techniques of work simplification to tasks performed on the job

TASKS	COMPETENCIES NEEDED TO PERFORM TASKS IN TERMS OF	
	ABILITY TO:	UNDERSTANDING OF:
Reads recipes, knows terminology, and follows directions	Follow standard recipes accurately	Terminology, abbreviations, substitutions, and equivalents used in recipes Importance of following standard procedures when using a recipe Characteristics of a standard recipe
Measures and weighs foods according to specifications listed in standard recipes	Use standard weights and measures in preparing foods	Procedures to follow when measuring and weighing foods Functions of scales and balances and their use and care

UNIT V (Continued)

TASKS	ABILITY TO:	UNDERSTANDING OF:
Assembles food orders and places them on plates and trays	Portion foods accurately and arrange attractively on plate	Reasons for portioning foods Methods used to portion foods
Verifies orders by scanning filled plates to insure specified portion and quality of food	Check food orders quickly for accuracy and quality	Necessity for accurate portions to insure customer satisfaction
Plans work schedule so foods are ready at serving time	Schedule work so foods are prepared by serving time	Purpose of work simplification Work simplification techniques Principles of motion economy which affect job performance

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COURSE UNIT VI

FOOD PRODUCTION

OBJECTIVES: Describe procedures to be used in the preparation of quality food products

Identify standards for quality food products

TASKS	COMPETENCIES NEEDED TO PERFORM TASKS IN TERMS OF	
	ABILITY TO:	UNDERSTANDING OF:
Makes beverages, such as coffee and tea, and places them in serving locations	Prepares beverages of high quality consistently	Standard procedures for preparing beverages
Follows standard procedures for cooking a variety of foods--breads, pastries, salads, desserts, vegetables	Prepare foods following standardized procedures and recipes	Various processes of food preparation: Vegetables Breads Pastries Salads Simple Desserts
	Assemble ingredients and equipment for various processes of food preparation	Correct temperatures for preparing foods
Evaluates quality of food prepared	Judge quality of a variety of foods by sight, odor, and taste	Quality standards for raw and prepared foods

UNIT VI (Continued)

TASKS	ABILITY TO:	UNDERSTANDING OF:
		Necessity for consistency in preparation of high quality food products

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COURSE UNIT VII

FUNDAMENTALS OF BUS SERVICE

OBJECTIVES: Recognize the contribution bus service makes to the operation of the food service establishment

Identify tasks involved in bus service

TASKS	COMPETENCIES NEEDED TO PERFORM TASKS IN TERMS OF	
	ABILITY TO:	UNDERSTANDING OF:
Replenishes serving station during serving hours	Handle china, glassware, silverware, utensils, ice, and condiments in a safe, efficient, and orderly manner	Tasks involved in bus service Importance of bus service to overall food service operation
Fills condiment containers, arranges dishes and silverware in appropriate places	Organize supplies and materials for efficient, sanitary use	
Removes soiled items from tables and stations	Remove items from tables and serving station efficiently and quietly	Importance of quiet and efficient methods in the performance of the tasks
Carries loaded trays between kitchen and serving areas	Load and carry or push trays and carts properly	Efficient methods of loading and carrying or pushing trays and carts

UNIT VII (Continued)

TASKS	ABILITY TO:	UNDERSTANDING OF:
Sorts, counts, and stores utensils at designated places		

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COURSE UNIT VIII

TABLE SERVICE TECHNIQUES

OBJECTIVES:

- Define the various types of service used in the food service industry
- Describe procedures for setting the table for the different types of service
- Analyze techniques used in taking orders, serving foods, and clearing tables
- Recognize the necessity for alertness to customer needs
- Practice techniques which make the customer feel welcome and comfortable

TASKS	COMPETENCIES NEEDED TO PERFORM TASKS IN TERMS OF	
	ABILITY TO:	UNDERSTANDING OF:
Serves food in manner prescribed at place of employment	Serve food properly according to type of service used	American, French, Russian, and English types of service Techniques of fountain service Responsibilities involved in cafeteria service Ways to display foods in an attractive manner

UNIT VIII (Continued)

TASKS	ABILITY TO:	UNDERSTANDING OF:
		Importance of keeping serving area clean
Welcomes customers in an appropriate manner	Make customers feel welcome in a friendly, pleasant manner	Importance of first impressions in the food service industry
	Maintain an appropriate appearance	Appropriate appearance for service host or hostess
	Relate to customers in a friendly, pleasant manner	Personality traits which contribute to success as a service host or hostess
		Techniques to use when serving children and handicapped guests
Sets assigned tables at the beginning of the work day and maintains tables during service hours	Set tables in manner prescribed by employer	Terms related to table settings
		Methods of setting tables
Fills water glasses and distributes menu	Greet customer and take order accurately	Procedure to follow when greeting customer
Offers suggestions or answers questions about the menu	Explain terms on menu	Terms used on menus
Writes orders following prescribed methods		Methods for writing and placing orders
Places orders in kitchen	Place order in kitchen for efficient service	Necessity for taking orders accurately

UNIT VIII (Continued)

TASKS	ABILITY TO:	UNDERSTANDING OF:
Prepares menu folders	Type menu folders	Importance of following directions when typing menu folders
Serves food to customer	Serve food according to method used at place of employment	Techniques used in the serving of food at tables and booths
		Order in which service is performed for different meals
Checks the needs of the customers periodically and supplies them with needed items	Remain alert to customers' needs	Importance of being alert to customers' needs as a contributing factor in the success of a business
Clears items from table as the customer is finished with them	Remove dishes and food from table in prescribed manner	Procedure to follow when removing food and dishes from table
Itemizes and totals the prices of each order	Total checks accurately and quickly	Procedures for filling out checks
Presents check to customer		Manner in which checks should be presented to customer
Helps arrange tables for special parties	Arrange tables in an efficient manner	Possible table arrangements for parties

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COURSE UNIT IX

RECEIVING AND STORING FOOD AND SUPPLIES

OBJECTIVE: Identify procedures used in compiling orders, receiving, and storing food and supplies

TASKS	COMPETENCIES NEEDED TO PERFORM TASKS IN TERMS OF	
	ABILITY TO:	UNDERSTANDING OF:
Follows standard procedures for receiving food and supplies	Check in food and supplies ordered in an efficient and orderly manner	Forms used for receiving food and supplies
		Necessity for checking both quality and quantity of goods received
		Procedures to follow when receiving food and supplies
		Types of scales used for receiving goods
Stores food in appropriate facilities and at proper temperatures	Store food in appropriate facilities	Principles of storing food and supplies
	Care for storage facilities	Temperatures appropriate for different types of storage

UNIT IX (Continued)

TASKS	ABILITY TO:	UNDERSTANDING OF:
Assists with inventories of food and supplies	Take inventory accurately	Purposes of inventories Procedures for taking inventories

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JOB ANALYSES* AT THREE COMPETENCY LEVELS IN FIELD OF FOOD SERVICE

SEMI-SKILLED OR ENTRY LEVEL	SKILLED LEVEL	ADVANCED LEVEL**
Maintains work areas by washing, sweeping, mopping, or vacuuming	Excels in table service	Keeps financial and work records
Washes dishes, utensils, and equipment	Plans or adapts menus	Selects and orders food, supplies, and equipment
Assists cook with food preparation and cooking	Prepares a variety of foods	Checks and maintains inventories
Prepares fresh produce	Schedules work to produce foods at predetermined times	Supervises other employees
Assembles orders for serving	Cooks or holds food at proper temperatures	Coordinates production and service
Carries food and supplies between kitchen and serving area	Practices safe and sanitary methods in food preparation	Employs and trains employees
Maintains serving station with clean supplies	Judges food quality by sight, odor, and taste	
Removes table settings and linens from tables	Understands the importance of the visual appeal and appropriate combination of foods	
Sets tables appropriately	Uses standard weights and measures	
Welcomes customers to table and distributes menus	Understands and follows standardized recipes	
Takes and places food orders in kitchen		

JOB ANALYSES AT THREE COMPETENCY LEVELS IN FIELD OF FOOD SERVICE (Continued)

SEMI-SKILLED OR ENTRY LEVEL	SKILLED LEVEL	ADVANCED LEVEL
Serves food to customers	Uses commercial kitchen equipment efficiently and safely	
Itemizes and totals food checks		
Presents check to customers		

RECOMMENDED TITLES FOR WORKER AT EACH COMPETENCY LEVEL

SEMI-SKILLED OR ENTRY LEVEL	SKILLED LEVEL	ADVANCED LEVEL**
Busboy/Busgirl	Service Host	Head Cook
Waiter/Waitress	Service Waitress	Supervisor
Kitchen Helper	Cook	Assistant Manager

* Since food services within a community vary, a job analysis is recommended to provide a basis for planning a local program.

** Advanced level is not comparable to technical or managerial levels; more years of experience and training are required.

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BIBLIOGRAPHY

BOOKS

Harris, Ellen. *Professional Restaurant Service*. Toronto, Canada: McGraw Hill Book Company, Inc. 1966.

Kotschevar, Lendal H. *Quantity Food Production*. Berkeley, California: McCutchan Publishing Corporation. 1966.

Stokes, John W. *Food Service in Industry and Institutions*. Dubuque, Iowa: William C. Brown Company. 1960.

PAMPHLETS

________. *A Job Description Guide to the Ohio Restaurant Industry*. Columbus, Ohio: The Ohio State Restaurant Association. 1965.

Elliott, Travis. *Profitable Food Service Management Through Job Analysis, Descriptions and Specifications*. Chicago, Illinois: National Restaurant Association. 1966.

________. *Job Descriptions for Club Occupations*. Washington, D.C.: Club Managers Association of America. 1964.

Kipness, Jean. *Judy the Waitress*. Dallas, Texas: Webster Division, McGraw Hill Book Company. 1966.

________. *Occupational Guide (Busboy-Busgirl, Kitchen Helper, Waitress-Waiter, Cook-Chef)*. Indianapolis, Indiana: Indiana Employment Security. 1965.

CURRICULUM MATERIALS, MIMEOGRAPHED

Alabama State Department of Education. *Outline for Occupational Home Economics Course in Commercial and Institutional Food Preparation*. Montgomery, Alabama: Home Economics Education, Vocational Division.

Alabama State Department of Education. *Outline for Occupational Home Economics Course in Serving Food Commercially*. Montgomery, Alabama: Home Economics Education, Vocational Division.

Connecticut State Department of Education. *Occupational Course in Food Services*. Hartford, Connecticut: Home Economics Education Service, Vocational Education Division. April, 1966.

Florida, Orange County Public Schools. Course Outline Supervised Food Service Worker. Orlando, Florida: Home Economics Department, Colonial High School.

Greiber, C.L., Director. Training Restaurant Sales Personnel. Madison, Wisconsin: State Board of Vocational and Adult Education. 1962.

Iowa Board of Control State Institutions. Course of Study Vocational Cooking and Cafeteria Training. Des Moines, Iowa: Vocational and Dietary Departments. May, 1967.

North Carolina Department of Public Instruction. Basic Guide for Food Service Training. Raleigh, North Carolina: Division of Vocational Education, Home Economics Section.

Ohio Department of Education. Vocational Home Economics Cooperative Training Programs in Food Service for High School. Columbus, Ohio.

Prideaux, Jean S. Large Equipment Manual. Columbus, Ohio: The Ohio State University, School of Allied Medical Services, Division of Medical Dietetics. 1966.

Prideaux, Jean S. Small Equipment Manual. Columbus, Ohio: The Ohio State University, School of Allied Medical Services, Division of Medical Dietetics. 1965.

Schubert, Genevieve W. A Sample Wage Earning Training Program for: Waitress Training. Milwaukee, Wisconsin: Milwaukee Vocational Technical and Adult Schools.

The University of Georgia. Tentative Guide for Occupational Education in Vocational Home Economics. Athens, Georgia: Prepared in an Institute for Regions III and IV. July 25-August 12, 1966.

University of Kentucky. Suggested Guide Training Program for Food Service Workers. Lexington, Kentucky: Home Economics Education, Wage Earning Program. 1965.

University of Missouri. Chef. Columbia, Missouri: College of Education, Department of Industrial Education. 1966.

University of Missouri. Food Service. Columbia, Missouri: College of Education, Department of Industrial Education. 1966.

U.S. Department of Agriculture. Training Course Outline on Use and Care of Equipment. Washington, D.C.: Agriculture Marketing Service. May, 1960.

INSTRUCTIONAL MATERIALS
FOR
STUDENTS

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WHAT IS A COURSE OF STUDY?

INTRODUCTION TO STUDENTS

Betsy: What's this new Course of Study we're going to be using in our HECE (Home Economics Cooperative Education) class all about? The cover looks great, but I don't know about what's inside.

Kathy: I think it's going to be a big help to us both in class and on our jobs. We'll use it in class on the days when we're supposed to study about our particular jobs.

Betsy: That should help, I guess. What do we do--start at the beginning and go clear through it?

Kathy: Not necessarily. It's divided into units and topics related to tasks we might perform on our jobs. After going through the first unit we can skip to any unit we want to that has something to do with our job.

Betsy: You mean I don't have to go through all of it? That sounds great!

Kathy: Well, since jobs vary so much and the authors tried to include information for different kinds of jobs, there may be some units that won't apply to us right now. But I think it helps to know what else is going on where we work or what some of the other job opportunities are. The more we know, the more successful we'll be on our jobs and the better chance we'll have to get a job somewhere else if we move away from here.

Betsy: I suppose you're right about that. Besides, I noticed some units, like the one on sanitation that would apply in one way or another to everyone employed as a food service employee.

Now I have another question. I saw references listed at the beginning of some of the topics. Do we have to read those? Isn't the same information in the Course of Study?

Kathy: No, the references include different information so it's important that we read them as well as what's in the Course of Study. I know it's a bother to get the references sometimes, but there would be no point in putting something in the Course of Study that was already in print. Besides, I've found some information that wasn't assigned in the references that was helpful to me.

Betsy: I saw questions at the end of each topic, but assignments only after some topics. What's the difference? They both sound like work to me.

Kathy: The questions are to help us see if we understand what we've read, while the assignments give us a chance to apply what we've read to our jobs. The assignments help us see how the things we've learned relate to what we do. There's no right or wrong answer to an assignment--what we do is left up to us. Any more questions?

Betsy: Not right now. I want to do well on my job and I think this Course of Study will help me. I'm ready to get started on Unit I, and then I think I'll try the Unit on equipment.

UNIT I-1

WHAT IS A FOOD SERVICE EMPLOYEE?

SUBJECT: Job Opportunities in Food Service

OBJECTIVES: Be able to (1) describe the various tasks assigned to employees in different areas of food service
(2) discuss job opportunities in food service
(3) analyze self in terms of characteristics found in successful food service personnel

Opportunities for careers in the food service industry are endless because of the increasing number of food service establishments. Everyone, at one time or another, will be served by the food service industry whether it be in hospitals; nursing homes; school lunchrooms; restaurants; hotel, motel, or college dining rooms; or cafeterias.

It is estimated that Americans now eat 25% of their meals away from home, which is an average of 800 million meals served each week in public eating places. Some years ago this practice of eating away from home was almost unheard of for the family unit. Some of the reasons for this change in eating habits are: (1) our higher standard of living, (2) the increase in leisure time, (3) the inability to get help in the home, (4) the increased number of women working outside the home, and (5) the desire for specialized foods. All of these reasons have contributed to the growth of the food service industry until today it ranks fourth in size among industries in the United States.

Approximately 550,000 commercial and institutional food service establishments are in operation in the United States today. These establishments employ over 2 million people. More than 150,000 openings are expected annually in the restaurant industry alone through the mid-1970's. Thus, the professional opportunities in food service are unlimited. The fact that high school and college curricula are offering training in the various areas of food service management and food preparation indicates the importance of and need for trained personnel in every phase of the industry. The progress made by a student participating in a food service program will be limited only by his interests, abilities, and training.

Opportunities for advancement are offered in food service positions. The restaurant industry, in particular, offers chances to progress almost as fast as the employee is willing and able to assume the additional responsibility. Many restaurant owners started as bus boys and mastered a variety of jobs as they rose to managerial positions.

What kinds of people are likely to enjoy work in food service? As you read through the list of characteristics which follow, ask yourself if these describe you in any way.

Do you genuinely like people? Positions in food service put you in constant contact with people--those you work with and those you serve.

Are you interested in serving people? This business is a service to people and you must be interested in pleasing them, even though some may be rather difficult at times.

Do you take pride in your appearance? A neat, clean appearance is a necessity for positions involving work with food and contact with customers, students, and patients.

Are you in good health and physically able to do hard work? Many positions in food service demand long hours of standing and/or walking and require tasks to be completed in as short a time as possible.

Do you like food and enjoy working with it? If the preparation and service of good quality food is satisfying to you, a position in food service will appeal to you.

Are you able to maintain an even disposition under pressure? Emergency situations occasionally occur in the food service industry. The ability to remain calm and to adjust quickly to the situation is, therefore, an asset in this industry.

Are you willing to do a good job and to learn as much as possible while on the job? Any food service operation depends on each member of the team performing his duties to the best of his ability. Concentration on doing one's tasks well is important to success.

TASKS PERFORMED BY FOOD SERVICE EMPLOYEES

At the entry level, the food service employee who works primarily in and/or between the serving area and the dishwashing section of the kitchen will remove dishes, silverware, glasses, and linens from the tables; place items removed systematically on trays or carts; transfer the loaded trays or carts to the kitchen or dishroom; deposit the items in specified containers or areas; clean the surfaces of the tables and chairs; and maintain a supply of linens, table settings, and other necessary items convenient to the serving area.

General housekeeping duties include daily mopping or vacuuming of floors; thorough cleaning of the surfaces of tables, chairs, and serving stations; and replacement of all the equipment and supplies that are required for the assigned area. Any spilled food or liquids must be wiped up promptly.

The entry level employee may be expected to assist the waiter by resetting the tables with silverware, glasses, linens, and filled condiment containers; carrying heavy trays of food; and occasionally serving extra items to the customers as requested. Other duties may include making the coffee and iced tea, filling the beverage boxes, checking out needed supplies from the storeroom, filling condiment and ice containers, and arranging tables for special groups.

The overall responsibility of the beginning food service employee is to maintain the orderliness and cleanliness of the serving area. Bus service is an important job because cleanliness is essential to the successful operation of any food service establishment.

SERVICE HOST OR HOSTESS (waiter or waitress)

The service host or hostess (waiter or waitress) works primarily in the serving area of the food business. He or she takes orders for food; places orders for each course in proper sequence in the kitchen, carrys the food from the kitchen to the tables, serves the food using prescribed techniques, itemizes and totals checks for all the foods ordered, and presents the checks to the customers.

He is expected to make his customers feel welcome and comfortable, to maintain an awareness of the needs of the customers, to fulfill promptly any reasonable requests made, and to maintain the neatness of the table at all times during the serving period. He may be expected to present the menu and offer suggestions upon request.

Other duties may include preparing menu folders, arranging tables for special groups, making beverages, assembling orders, filling condiment containers, receiving payment from the customer to take to the cashier, and returning any change that may be due the customer.

Housekeeping duties may include clearing the tables and disposing of the used items in proper locations and containers, cleaning off the tables and chairs, and attending to the general overall appearance of the assigned area.

The most essential responsibility is to serve the customers efficiently and safely in a courteous and friendly manner which promotes the successful operation of the food service business where employed.

COOK'S HELPER

Other entry level jobs in food service may involve working as a cook's helper, kitchen helper, dishwasher, or potwasher depending upon the type and size of the operation. The employee is responsible for performing the simpler tasks that are essential in the preparation of food and maintaining sanitary and orderly conditions for equipment and surroundings.

As a cook's helper, one's tasks may include washing, peeling, and/or chopping fruits and vegetables; watching and/or stirring foods to prevent burning while cooking; weighing or measuring staples for the cook; preparing beverages; adding finishing touches to prepared foods; assisting in assembling orders placed by the waiter; and verifying the orders after they have been assembled. The entire time may be devoted to one type of food preparation or work may be assigned in a variety of preparation centers.

If one's main job is concerned with sanitation and maintenance, then his tasks include keeping the kitchen and equipment clean. He is expected to sweep and mop the floors and clean and sanitize work tables, butcher blocks, pots and pans, steam tables, and steam trays. A knowledge of the care of equipment is essential for this job. Other tasks may include washing and polishing silverware, washing glasses and dishes, carrying trays of food or materials to specified locations, removing and/or replacing equipment and supplies as needed in assigned areas, checking out needed supplies from the storeroom, and filling staple containers.

As is true in any food service establishment, all new employees are taught and expected to observe the basic principles of safe food handling. In addition to personal cleanliness and appearance, the trainee is expected to maintain good work habits. Since a clean environment is necessary for sanitary preparation of food, the trainee is expected to keep work areas, surfaces, and utensils clean and orderly.

With the increased costs of labor and food, it is essential that employees be as versatile as possible. Employers cannot always afford to hire separate personnel for each of the tasks listed above, so one person is often expected to carry out a variety of tasks. An employee who welcomes opportunities to work at different types of job assignments will increase his ability to fit into a variety of types of positions in the food service industry.

ASSIGNMENT:

List the tasks you perform on your job. Discuss with your teacher the kinds of information you need in order to do a good job at your training station.

UNIT I-2

WHAT IS A FOOD SERVICE EMPLOYEE?

SUBJECT:	Employee Qualifications
TASK:	Accepts instruction and guidance from supervisory personnel in performing duties assigned as food service employee
OBJECTIVES:	Be able to (1) evaluate self in terms of qualities which contribute to success as a food service employee (2) determine attitudes which would contribute to successful job performance

ATTITUDES

When the food service employee begins work at the training station, he is on the first rung of the "world of work" ladder. Whether he falls off, remains on the same rung, or moves up to higher rungs depends largely upon his personal qualifications and interpersonal relationships with other personnel. He learns, sooner or later, that it is often easier to secure a job than to hold it and earn promotions.

If the food service employee wishes to be successful, it is suggested that he examine his attitudes toward his employer, his fellow workers, and the job. The relationship between these attitudes and success on the job cannot be overemphasized.

Attitude Toward Employer

An important attitude to develop is loyalty to your employer. This means that you are concerned with the services provided in the food service establishment where you are employed and want the customers, students, or patients to receive the best food and service possible. Even though you may feel your role is insignificant, no one else is assigned your tasks, and it takes everyone working together to keep things running smoothly and to maintain a good reputation for the business. Willingness to carry out the rules and policies of the business, as well as tasks assigned, is part of what is involved in being loyal to your employer.

The ability to follow directions and accept suggestions and/or criticisms will help improve your job performance. The supervisor's comments are meant to help you to do a better job, not to hurt your feelings. There is usually a reason for tasks to be performed in a certain way and an attitude of open-mindedness is an asset on any job.

Attitude Toward Fellow Employees

Success as a food service employee is largely influenced by one's ability to get along with others. A friendly, sincere manner, willingness to do one's share of the work, and respect for the knowledge and skill obtained by the more experienced employees will contribute to good relationships with fellow employees.

One of the most important factors in working as a member of the food service team is to look for jobs to do when your tasks are completed. Helping other employees not only provides additional job experiences, but it also helps them to know that you are interested in working cooperatively with them. Flexibility is another trait which is important in working as a member of a team to provide the necessary services to the customers, students, or patients. Emergencies may occur which disrupt the usual work schedule, and you may be asked to do some extra task or help someone with his job. The ability to change your activity or line of thought quickly is part of being flexible in your job.

Attitude Toward the Job

A food service employee's job deserves his undivided attention and his best efforts. To it he should bring a genuine interest, positive attitudes, and a good physical condition. He will then be able to deliver the high quality performance that should be his goal.

PERSONAL CHARACTERISTICS

In addition to the attitudes mentioned above, there are personal traits which are desirable to possess. Employers not only look for these personal traits when you are applying for a job, but also use them as a basis for evaluating you when you are one of their employees. One's failure to keep a job is more often due to a lack of desirable personal traits than a lack of job skills. These personal characteristics may be improved and/or developed when the effort is sincere.

Some of the personal traits which are important to success as a food service employee are given in the check list below. Answer the questions honestly to see how you measure up.

WHAT KIND OF FOOD SERVICE EMPLOYEE ARE YOU?

	MOST OF THE TIME	SOMETIMES	SELDOM
1. Appearance			
Do you start the day with a smile?			
Do you check your appearance before going to work?			✓

	MOST OF THE TIME	SOMETIMES	SELDOM
Appearance (cont'd.)			
Do you check your clothing for rips, missing buttons, and sagging hems?			
Is your skirt length appropriate?			
Does your dress fit properly without being too tight?			
Is your hair clean and neatly arranged?			
Do you wear a hair net or cap when on duty?			
Is your make-up applied correctly and in moderation, on a clean face, not over old make-up?			
Do you refrain from wearing jewelry?			
Are your teeth clean and your breath fresh?			
Are your hands clean and nails neatly manicured?			
Do you remove nail polish when it begins to chip?			
Do you take a daily bath and use a reliable deodorant?			
Are your shoes sensible, clean, and in good repair?			
Do you walk gracefully?			
2. **Voice**			
Do you speak in a pleasant manner and moderate tone?			
Do you have a reasonable command of the English language?			
3. **Cooperation**			
Are you willing to cooperate with your co-workers? your supervisor? (Or do you sometimes refuse to cooperate and do things your own way?)			
Are you willing to try to work with someone in spite of a personality conflict?			

	MOST OF THE TIME	SOMETIMES	SELDOM
Cooperation (cont'd.)			
Do you observe and obey the rules and policies of the food service operation?			
Are you willing to do any job to which you may be assigned?			
Are you willing to do jobs or routine tasks not originally assigned to you?			
4. Work Habits			
Are you careful, not wasteful, in the use of food supplies and materials?			
Do you handle and use equipment carefully?			
Are you prompt and efficient (or do you waste time)?			
Do you accept and practice new or more efficient techniques?			
Do you show interest and enthusiasm in what you are doing? (or do you get bored and distracted easily?)			
Does your work meet the standards of the food service operation where you are employed?			
5. Accuracy			
Do you follow directions without the need of having them repeated?			
Do you complete jobs assigned to you?			
Do you complete jobs on time?			
Do you stay at your assigned station?			
Do you work well without constant supervision?			
6. Courtesy			
Are you always courteous and polite to fellow employees and your supervisor?			
Are you courteous and polite to customers?			

	MOST OF THE TIME	SOMETIMES	SELDOM
Courtesy (cont'd.)			
Do you respect the desires, interests, and opinions of your fellow workers?			
7. Dependability			
Can your supervisor depend on you for high quality work? (Or does it vary according to your feelings?)			
Can your employer depend on your loyalty and honesty? (Or do you complain to your co-workers?)			
Are you able to work under pressure? (Or do you become nervous, irritable, inefficient, and upset?)			
Can your employer depend on you to maintain high standards while doing repetitious work?			
8. Health and Sanitation			
Are you in good physical health?			
Do you eat properly and get plenty of rest? (Or do you drag on the job?)			
Do you practice good posture?			
Do you watch your weight, whether overweight or underweight?			
9. Initiative			
Are you able to see what needs to be done without being told?			
Do you show leadership when you are in charge without being "bossy?"			
10. Promptness			
Are you on the job regularly?			
Are you punctual and do you begin work right away?			

	MOST OF THE TIME	SOMETIMES	SELDOM
Promptness (Cont'd.)			
Do you call when you are unable to go to work?			
11. Self-control			
Do you keep your temper under control or do you talk back to the boss?			
Is your disposition pleasant at all times?			
Do you have the friendship and respect of your supervisor and co-workers?			
Do you accept criticism and remain friendly?			

QUESTION:

1. From the information on pages A-7 and A-8, make a list of at least six attitudes or traits which would contribute to success as a food service employee.

ASSIGNMENT:

Select at least two or three areas in which you placed your check in the "Sometimes" or "Seldom" columns when you went through the check list in this unit. Work out a plan for making these changes in yourself. Follow through with your self-improvement campaign. Willingness to improve is always appreciated by an employer.

Turn you plan in to your teacher. Occasionally, discuss with her the progress you are making.

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UNIT II-1

SANITATION

SUBJECT: Food Contamination and Poisoning

TASK: Handles food, beverages, equipment, utensils, and table settings in ways to prevent contamination

OBJECTIVES: Be able to (1) identify ways disease may be spread through careless handling of food and equipment
(2) analyze situations in which sanitation procedures have been violated
(3) evaluate own personal habits of cleanliness in relation to accepted sanitation procedures

REFERENCES: ________. Preventing Food-Borne Diseases. Austin, Texas: Texas State Department of Health. 1966, pp. 5-18; 24, 25.

________. Here's How! New York, New York: Plate, Cup, and Container Institute, Inc. Entire pamphlet.

It is estimated that at least one million persons in the United States suffer from foodborne illnesses each year. These illnesses occur when the people responsible for the preparation and serving of food do not observe safe and sanitary methods of food handling.

Food-born diseases or illnesses result when contaminated food or drink is taken into the body. These illnesses fall into two main categories: those caused by eating foods containing harmful bacteria, and those resulting from eating foods in which bacteria has grown previously and developed a toxin (poison). Salmonella and Streptococcus (Strep) are two kinds of bacteria transmitted in foods, which, when eaten, produce a food-infection poisoning. Staphlococcus (Staph) and botulinus bacteria, on the other hand, produce a poison or toxin in the food, which, when eaten, causes a food-intoxication form of poisoning.

Foods most commonly involved in cases of food-borne illnesses are listed below:

SALMONELLA:	Meat, milk, milk products, eggs, poultry, meat pies, custard-filled bakery goods
STAPHYLOCOCCUS:	Prepared or unheated foods, such as custard-filled pastries, cream pies, egg or potato salads, fish, meat products, sandwiches, and creamed dishes; ham, poultry dressing, chicken or turkey salad
BOTULISM:	Home-canned vegetables or meats

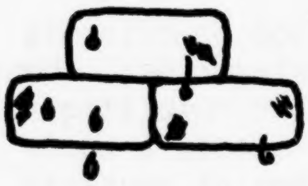
In summary, potentially hazardous foods include all custard and cream fillings, poultry, egg products, shellfish, salads, or creamed dishes containing meat, fish, eggs, or milk products. In other words, foods high in protein content are those most often contaminated.

How do the bacteria described above grow and multiply? They need (1) food, (2) moisture, and (3) warm temperatures to stay alive and multiply. They multiply rapidly under certain conditions. The illustrations on page A-15 show activities of the bacteria during a three hour period of time.

Food-borne disease prevention is essential. The food service employee needs to know how food-borne illnesses can be prevented; moreover, he must want to prevent the occurrence of these illnesses. He must, therefore, be alert, cautious, and conscientious as he carries out his responsibilities in handling and serving food.

There are four basic rules which can be used as guidelines in the handling and serving of food.

I. Keep Food Cold. Food-poisoning bacteria are not killed by low temperatures, but as can be seen on the chart on page A-16, their growth can be slowed or stopped. Temperatures of 40° F. or below are necessary to halt growth of bacteria.



All perishable foods should be refrigerated as soon as possible after delivery. Food products such as salads or cream-filled desserts containing moist carbohydrates or proteins should be refrigerated immediately after preparation. Allowing these foods to stand at room temperature gives bacteria a chance to grow rapidly.

Left-overs should be refrigerated as soon as possible. It is not advisable to keep left-overs more than 24 hours. Do not mix left-overs with fresh food. Food that has been held at room temperature for several hours should not be considered safe and cannot be made so by refrigeration.

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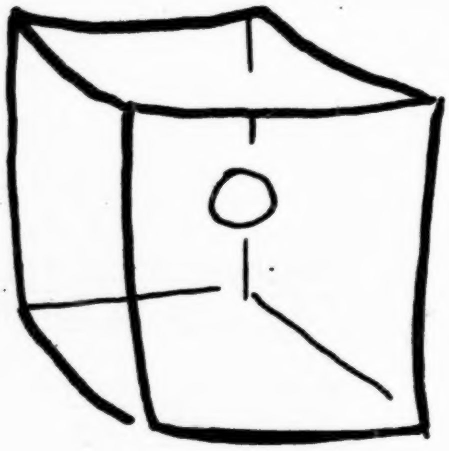
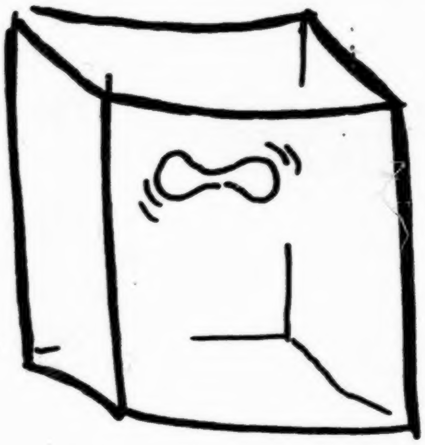
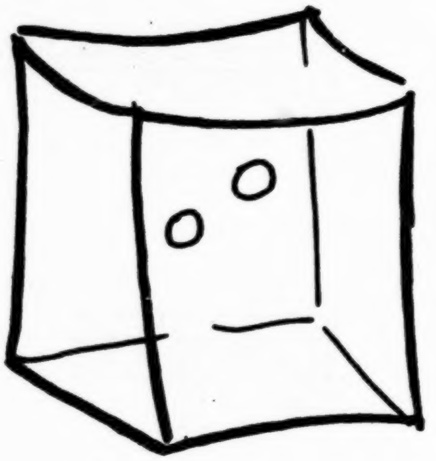
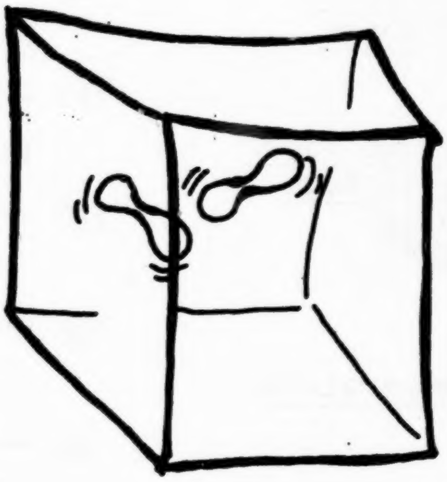
BACTERIA

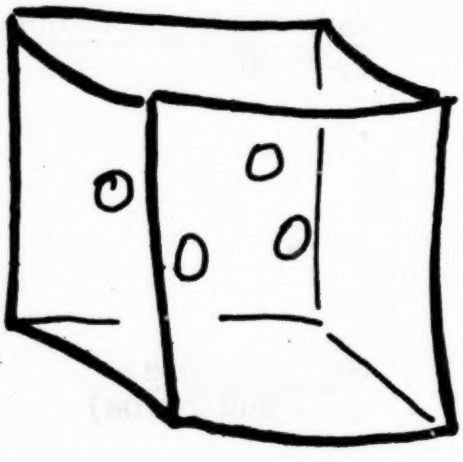




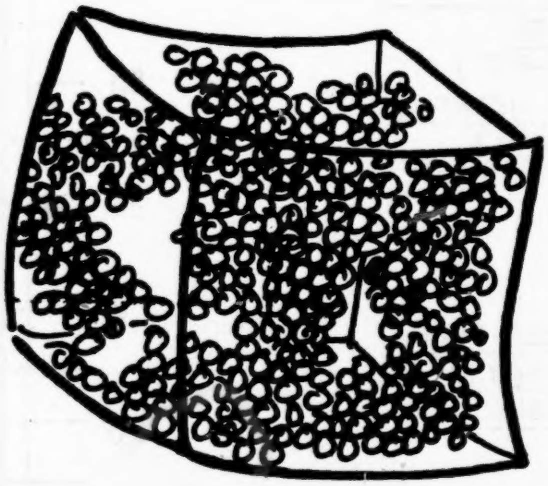


After 20 minutes





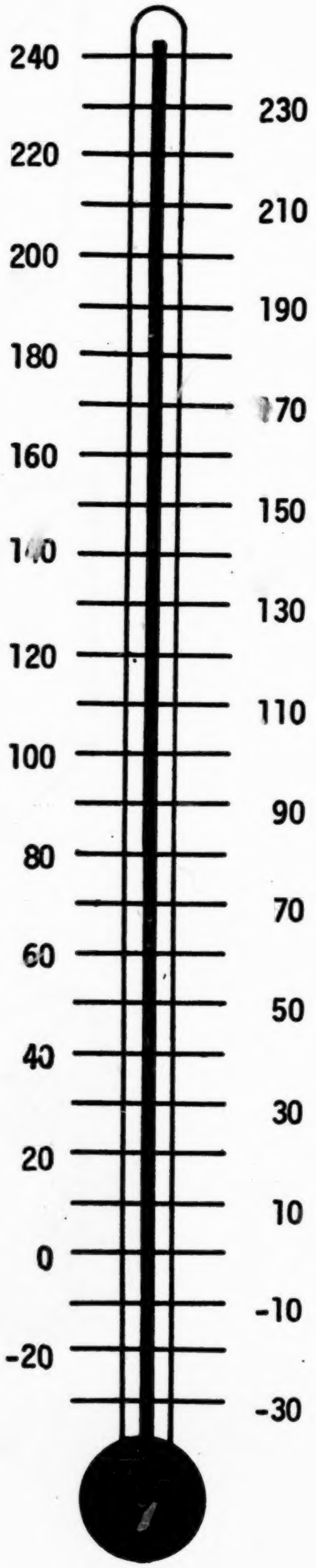
After 40 minutes



After 3 hours

THE EFFECT OF TEMPERATURE ON CONTROLLING BACTERIA GROWTH IN FOODS

Bacteria die or stop increasing when (a) spilled food is removed, (b) moisture is removed, and/or (c) food is kept very hot or very cold. The effect of temperature on the control of bacterial growth in foods is shown in the illustration below:


240
230
220
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170
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140
130
120
110
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70
60
50
40
30
20
10
0
-10
-20
-30

Bacterial control in low acid foods

Keep hot foods 145° or above

Refrigerate foods rapidly through this range (60°-150°)

Body temperature-98.6°

Some bacteria growth (40°-60°)

Slow growth bacteria (30°-40°)

Frozen food storage 0° or less

Staphylococcus Toxin Resistant to boiling-212°

Botulinus Toxin Inactivated by boiling

Dish Sanitation (168°-180°)

Machine Dishwashing (140°-160°)

Rapid bacteria growth in food (60°-120°)

Keep most cold foods (34°-40°)

Quick freeze (-10° and below)

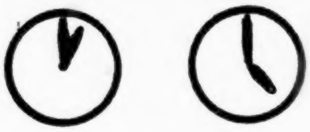
The use of shallow pans, about 4 inches deep, for refrigeration of large amounts of food allows the food to cool more rapidly than it would in deep containers. This rapid cooling allows less time for the growth of bacteria to occur. Stirring the food during cooling also helps to reduce the length of the cooling time.

A misconception held by some people is that food should be allowed to stand at room temperature for several hours and should not be put into the refrigerator while it is still warm or it will "spoil." This is not true unless the cooling unit is overloaded and, as a result, the temperature of the refrigerator is raised to a level where spoilage starts. If a large amount of hot food needs to be refrigerated, it can be cooled partially by placing the pans of food in cold water before putting them in the refrigerator.

II. Keep Food Hot. The danger zone for growth of bacteria is between 40° and 140° F. Hot foods should, therefore, be held at temperatures of at least 140° F.

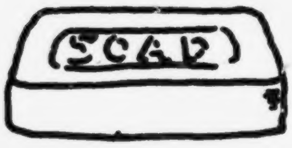
It is important that foods such as pork, poultry, eggs, ground meats, and dehydrated food products, be cooked thoroughly to destroy certain types of bacteria. Temperatures of 165° to 170° F. should be reached in the center of the food.

III. Keep Time in Danger Zone Short. Foods should not be held at temperatures between 40° and 140° F. more than four hours. This time is cumulative, i.e., one hour in the morning, one hour another time, and two hours at a third time add up to the four hour limit.



Certain foods are more likely to be contaminated during these in-between temperatures than others. Turkey or other poultry dressings should not be at these temperatures for more than four hours. Left-over poultry meat, dressing, and gravy should be refrigerated immediately. Sandwich fillings and salads and cooked hams are examples of other foods which should not stand at room temperature more than four hours.

IV. Keep Food Clean. One way to keep food clean is to use clean equipment. Three "tips" for general cleaning of equipment include the following.



1. All kitchen equipment used in the preparation or serving of food should be cleaned thoroughly after each use.

2. All utensils used in the preparation and/or service of food should be cleaned and sanitized thoroughly before being used.

3. After it is cleaned, all equipment should be handled and stored properly to prevent contamination.

Food may be infected:
1. when a person sneezes or coughs.
2. when hands have not been washed properly.
3. by fingernails which have not been cleaned properly.
4. by handling food with hands, instead of using the proper utensil.
5. by using dishes not sanitized properly.
6. by employees who are not well.
7. when it is handled by persons with cuts or infections on their hands.

The basic rules for food sanitation practices can be shortened into four clues to remember when handling food. Notice the repeated use of the number four.[1]

1. 4 rules--cold, hot, time, clean
2. 40° F. and below--4 inch deep storage pans
3. 140° F. and above
4. 4 hour incubation time

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[1] Adapted from Current Practices in Food Protection, U.S. Department of Health, Education, and Welfare, Public Health Service. Cincinnati, Ohio. p. 7-3.

SANITATION PRACTICES IN FOOD HANDLING

The general sanitation rules listed below are good habits to form and will help to protect both the health of the food service employee and those he serves. Not only are food-borne illnesses transmitted to foods, but communicable diseases are also spread by way of food. Examples of these are respiratory, intestinal, and skin diseases. All of these diseases may be transmitted by employees who are infected. It is necessary, therefore, that employees be in good health and practice sanitary precautions.

1. Hands should be washed before food is handled.
   Never lick fingers or thumbs when preparing and serving foods.
   Avoid putting fingers on face or nose.

2. Always wear a hair net or cap when working in the food service area to keep the hair covered and away from food.
   Avoid putting fingers in hair because they become contaminated by the organisms which collect in the hair.

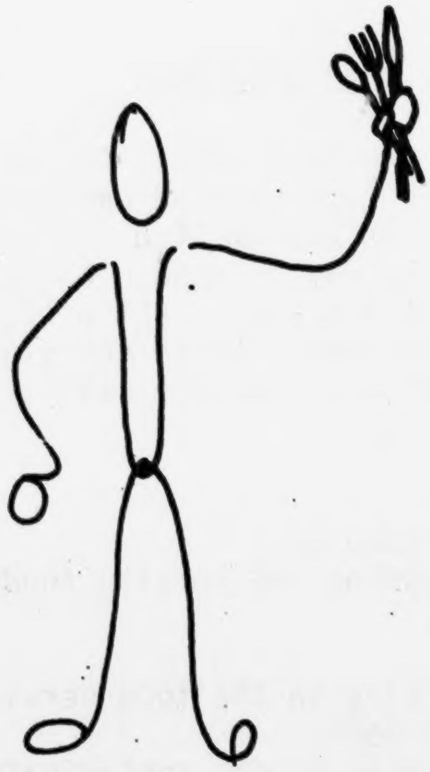
3. Do not chew gum near the food preparation and service area.

4. Do not touch the "business end" of forks, knives, and spoons used in preparing foods, serving patient trays, or setting tables for dining room service.

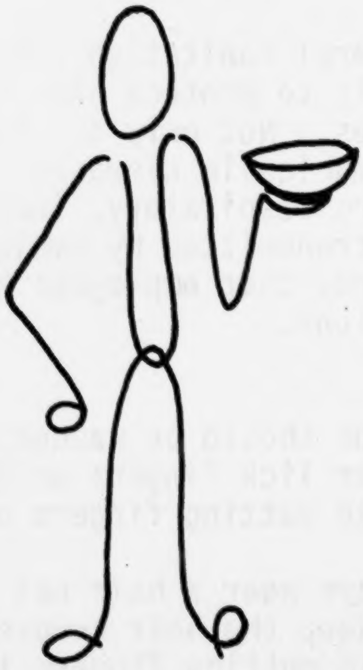
5. Handle bowls, glassware, and cups properly.
   a. Do not touch rims of glassware and cups.
   b. Do not put fingers inside mixing bowls, plates, and saucers.

6. Use tongs for:
   a. placing ice in glasses or pitchers.
   b. serving pastry, rolls or doughnuts.

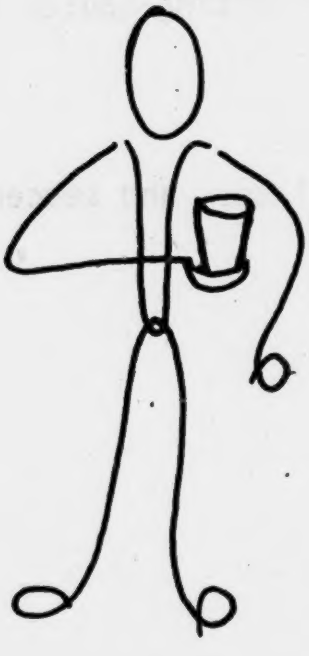
Sanitary methods of handling food and utensils are demonstrated in the illustrations below:



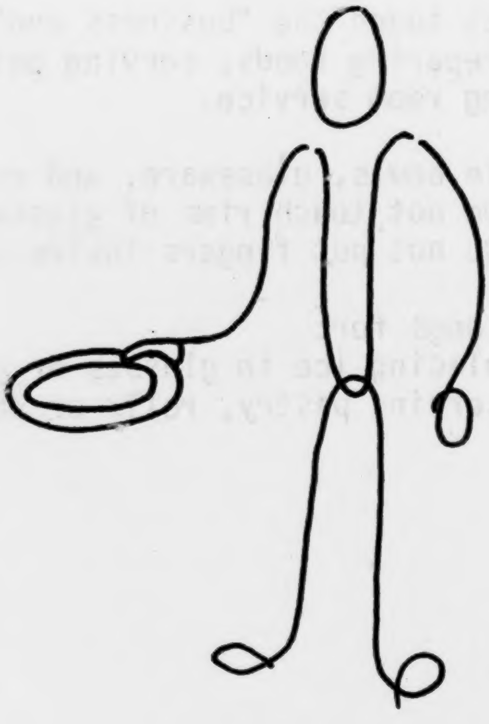
Carry silverware by handle



Hold bowl on the bottom



Hold glass at base



Carry plate by rim

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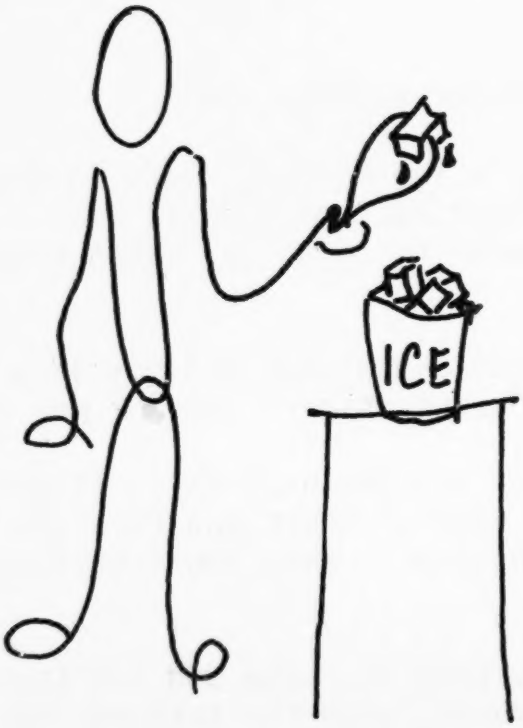
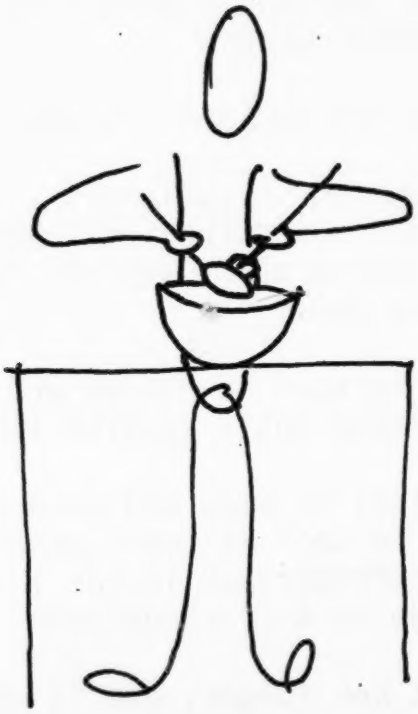


Use tongs for ice



Use large spoon and fork for mixing salad

QUESTIONS:

1. Why is it important that hair nets or caps be worn by food service employees?
2. At what temperature range do bacteria grow most rapidly in foods?
3. What is meant by food poisoning?
4. True or False: Few cases of food poisoning or infections occur in the United States.
5. a. What is the source of salmonella germs?
   b. What foods do they contaminate?
   c. How can this contamination be prevented?

6. a. Where are staphylococcus germs found?
   b. What happens when staphylococcus germs reproduce in food?
   c. How can staph food poisoning be prevented?
   d. What foods are most often involved in staph poisoning?

7. a. Where is the botulism germ found?
   b. In what kinds of foods is it most likely to be found?

8. Which of the three germs causing food-borne diseases is most likely to be fatal to man?

9. What are the two main categories of food-borne illnesses?

10. A chicken noodle casserole was prepared in the morning, left in the oven which was turned off until late afternoon, and then it was warmed and served. Why was this not a wise thing to do? What should have been done?

11. Sally made some ham salad and turkey salad sandwiches and put them in the refrigerator until serving time. Was this necessary? Why or why not?

12. Ten gallons of stew had been prepared for use the next day. It was allowed to cool at room temperature for several hours and then placed in the refrigerator in the 10 gallon container. What two mistakes were made in this situation?

13. Mary cut her finger, and it was slightly swollen. She did not say anything about it to her supervisor, however, when she told her to remove some chicken from the bones. Which germ that causes a food-borne disease might Mary have spread to the customers through her infected cut?

ASSIGNMENT:

Choose at least three things from this unit and/or the pamphlet, Here's How, that you can do to improve your work habits in relation to cleanliness and sanitation. Work out a plan for improvement in these areas. Turn this plan in to your teacher for approval. With the aide of your teacher, evaluate your progress each week for as long as necessary to form the habit.

UNIT II-2

SANITATION

SUBJECT: Sanitation Codes

TASK: Follows federal, state, city, and county sanitation codes

OBJECTIVE: Be able to relate provisions of sanitation codes to the duties of a food service employee

The main purpose of food sanitation codes is protection for the consumer of food. Specific purposes are to:

1. Protect food against infection by observing sanitary standards. These standards are meant to reduce the opportunity for bacteria to gain entrance into the food and multiply.
2. Insure wholesomeness of food so that it is clean, free from adulteration, and suitable for human use.
3. Meet customer expectations by providing a clean, appealing, pleasant atmosphere for meal service.

A food sanitation program is designed to cover all eating and drinking establishments, as well as food sources and the transportation of foods. Food sanitation programs should be based on nationally accepted public health principles and standards, but methods may vary due to local customs and problems.

The United States Department of Health, Education, and Welfare and the United States Department of Agriculture are the two federal agencies that are most concerned with the sanitary aspects of food production. Two divisions of the Department of Health, Education, and Welfare are the Food and Drug Administration and the Public Health Service. These divisions set up model codes which may be adopted by states, counties, and municipalities.

Other agencies having authority over food sanitation are state and local agencies, city health departments and boards of health, and the state departments of health. In general, the food sanitation code is set up by the Public Health Service and widely adopted by state and local health departments. This code defines applicable terminology, sets standards for food supplies and protection, sets standards for personnel, sets standards for food equipment, inspects sanitary facilities and contamination controls, and inspects physical facilities and operations.

A permit to operate may be issued to an establishment on the basis of the adopted code. Inspection of the food service business is done at regular intervals by a competent inspector from the agency in authority. Failure to comply with standards of the code may ultimately result in suspension of the permit to operate. It is of utmost importance that the food service employee understand:

1. the importance of sanitation.
2. the reason for the sanitation code.
3. the penalty involved if sanitation regulations are not met.

In this way, the food service employee is more likely to do her part in seeing that the regulations are carefully followed.

QUESTIONS:

Agencies

Food and Drug Administration
Public Health Service
Department of Health, Education, and Welfare
Department of Agriculture
State Department of Health
City Health Department

Using the above list of agencies, complete each statement:

1. ______________ and ________________ are the two main divisions of the U.S. Department of Health, Education, and Welfare which set up model sanitation codes.

2. A second federal agency which is concerned with the sanitation of food is ______________________.

3. Two types of local agencies which work with food protection and sanitation are ________________ and __________________.

ASSIGNMENT:

Find out what laws protect food in your city. What sanitation ordinances are in effect where you live? Which of these laws and ordinances affect you on the job as a food service employee?

UNIT II-3

SANITATION

SUBJECT: Procedures for Dishwashing

TASKS: Washes and inspects glassware, silverware, and china

Washes utensils and cooking equipment

OBJECTIVE: Be able to describe proper procedure for washing dishes and equipment

REFERENCES: Stokes, John W. Food Service in Industry and Institutions. Dubuque, Iowa: William C. Brown Company. 1960, pp. 172-189.

________. Preventing Food-Borne Diseases. Austin, Texas: Texas State Department of Health. 1966, pp. 37-43.

QUESTIONS:

1. According to Stokes, what are the four basic steps in washing dishes?
2. Why is it necessary that glasses be sterilized in the cleaning process?
3. What happens when utensils (knives, forks, and spoons) are piled in layers in the dishwashing machine basket?
4. Why is the use of dish towels not recommended for drying dishes?
5. What is the recommended temperature for rinse water used in dishwashing facilities?
6. When should the use of bactericides be considered?
7. What are detergents?
8. a. Which type of detergent is desirable in washing plastic ware and non-metal trays?
   b. What is the advantage of using detergents containing "wetting agents" when washing china?
9. What is one disadvantage of a conveyor type dish machine?
10. Why is a three-compartment sink preferable in the pot washing area?
11. When three-compartment sinks are used for washing pots and pans, what is the purpose of each compartment?

12. Health inspectors in most localities take frequent __________ counts.

13. A pot washing area is used for washing pots, pans, and ___________.

14. Lipstick marks can be removed from glasses only by using __________.

15. True or False:
It is not necessary to use the same precautions when washing pots and pans that are used when washing dishes.

16. What happens when the temperature of the washing solution is too cold? too hot?

17. Why is it recommended that utensils be pre-washed or rinsed?

18. When using a multiple vat setup for washing dishes and utensils, how long should the dishes be immersed in the water for sanitizing if it is 170° F.? 180° F.?

19. What two methods of sanitizing dishes and utensils when they are washed by hand are acceptable under the sterilization law?

20. How many times can the same chlorine solution be used?

ASSIGNMENT:

Describe the dishwashing procedure used in the establishment where you work. Which method of sanitizing is used if dishes are washed by hand?

UNIT II-4

SANITATION

SUBJECT: Cleaning versus Sanitizing

TASK: Handles equipment and utensils in ways to prevent contamination

OBJECTIVES: Be able to (1) define the role of cleanliness in sanitation
(2) describe procedures for cleaning and sanitizing equipment

REFERENCE: Kotschevar, Lendal H. Quantity Food Production. Berkeley, California: McCutchan Publishing Corporation. 1966, pp. 79-81; 85-95.

All equipment, utensils, dishes, and work areas must be kept clean and sanitized. All employees should keep the areas where they are stationed clean in order to prevent the possibility of food contamination. If everyone helps in the job of keeping surfaces and equipment clean and sanitary, all cleaning tasks will be easier.

QUESTIONS:

1. In quantity food preparation, precautions must be taken to insure that the food is nutritious, ____________, and __________ to eat.

2. Explain the statement: "Sanitation is a way of life."

3. In any food service the standards of sanitation and ________ should be emphasized as much as the standards of quality and cost.

4. The four sanitation goals are
   a. c.
   b. d.

5. What are three results of failing to clean equipment properly?

6. Disease and poison transferred by food to human beings are largely caused by ______________.

7. Two safeguards against air-borne types of contamination are:
   a.
   b.

8. Poor procedures for handling food and _______________ may cause contamination.

9. What is the difference between cleaning and sanitizing?

10. The three factors necessary for cleaning are _______________, _________________, and ___________________.

11. What two methods may be used for sanitizing?

12. Why is it a good idea for food supervisors to set up a program for cleaning and sanitizing?

True or False

13. Only a few food service employees have the responsibility of seeing that high standards of cleanliness and maintenance are kept.

14. Because of their immunity, flies, roaches, ants, and other household insects do not spread disease.

15. It is not necessary to check incoming supplies for insects or bugs, since they are always clean.

16. All foods purchased should come from sources which receive proper inspection by local, state, and federal inspectors.

17. A clean utensil is always sanitary.

18. Knives, forks, spoons, whips, spatulas, and similar equipment may be picked up by either end if one's hands are clean.

UNIT II-5

SANITATION

SUBJECT:	Care of Furniture, Floors, and Surface Areas
TASKS:	Cleans and sanitizes surface areas in kitchen and in the serving area Wipes off table tops and chair seats Washes or polishes assigned furniture daily Mops or vacuums floors
OBJECTIVES:	Be able to (1) recognize importance of clean tables and chairs (2) describe the procedures for cleaning different kinds of floor finishes

FURNITURE AND SURFACE AREAS

Care of the furniture is important in a food service establishment. If a customer sits down on a wet or sticky chair, he will certainly be a dissatisfied customer. If assigned to dust the furniture or wipe off the table tops and chair seats, remember how important this is to customer satisfaction.

What procedure should be followed when cleaning a table or counter? Obviously, the first step is to remove the dishes, glasses, silverware, and trash. If a cart is being used for the removal of these items, a separate pan is usually used for each item, i.e., silverware is put in one pan and dishes in another pan. Place the dishes in the pans quickly, but quietly. This eliminates breakage and also helps to provide a pleasant, quiet atmosphere.

The next step is to wipe the table or counter. The cloth used for this purpose should be clean, rinsed, and wrung out. Imagine how you would feel if someone used a dirty cloth to wipe the table or counter where you were eating. After wiping the table or counter run your hand over it to check that there are no sticky spots left and that it is dry.

At least once a day, the table tops or counters should be cleaned with a sanitizing solution. The kind used will vary from one establishment to another.

The ash trays, salt and pepper shakers, and sugar containers should also be checked and wiped clean, if necessary. Use a napkin to wipe the ash tray clean and shine it with your cloth. While you are at the table check the chair seats and, if necessary, wipe them clean and dry.

Areas in addition to table tops and counters which need to be kept clean are shelves, glass counters, pie cases, service equipment, and beverage containers. Dusty or dirty surfaces not only affect the customer's appetite, but also provide opportunities for bacteria to contaminate food. More customers are lost because of uncleanliness than for any other reason. Be alert to the appearance of all the surface areas in the area where you work and keep them spotless!

Plan ahead when you are assigned to cleaning tasks and have all the equipment you need with you. Move from one area to the next in an organized manner. If you have several different things to do, finish all of one task and then go on to the next one.

FLOORS

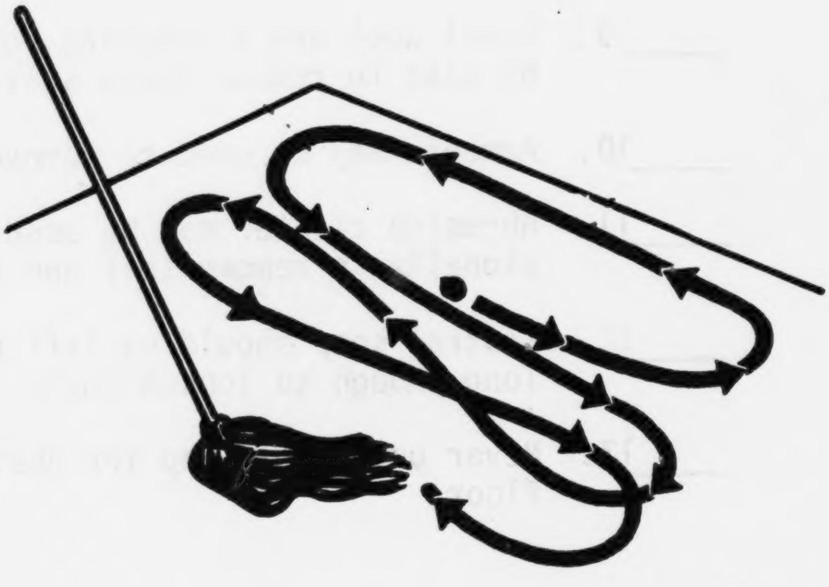
Have you ever noticed the floors in the food establishment where you work? Have you ever stopped to think about the importance of clean floors in a place where food is to be served? Floors must be kept clean for two reasons--safety and appearance. Watch floors constantly for spilled foods or other debris. Take time to clean the floor immediately--don't wait until after someone has fallen. Daily cleaning of floors is necessary in all food service establishments. If cleaning is carefully done each day, it will not be a difficult task. Suggestions for procedures to follow are given in the following chart:

KINDS OF FLOOR FINISHES	CARE OF FLOORS
Concrete	Scrub with neutral soap suds; rinse. Sweep regularly.
Terrazzo	Scrub with neutral soap suds; rinse, mop dry. Abrasive cleaner may be used occasionally to remove heavy soil and stain. Terrazzo sealer may be applied to areas where traffic is heavy.
Clay Tile	Sweep with soft brush. Wash with neutral soap suds, leaving on long enough to loosen soil; mop; rinse with clear, warm water. Mop dry.
Rubber Tile	Sweep with soft brush. Mop with clean lukewarm water. A small amount of ammonia or non-fat synthetic cleaner may be used if soil is not removed. Mop a small section at a time; rinse; dry. Buff thoroughly. The more the floor is buffed, the less often it will need to be washed.

KINDS OF FLOOR FINISHES	CARE OF FLOORS
Vinyl Tile	Sweep with soft brush. Wash with ordinary cleaning solutions. Rinse and mop dry.
Hardwood (waxed)	Sweep with soft brush or mop free from oil, as oil tends to dissolve wax and leave a film over the surface of the floor. To remove spots, rub floor with a cloth dampened with liquid wax and polish. Wax may be removed by rubbing floor with a cloth dampened with a prepared cleaner. Steel wool and a cleaning solution may be used to remove exceptionally soiled spots. Then the floor may be washed using mild, neutral soap and rinsed with clear water; dried; rewaxed; and polished.

Any task can either be done in a way which takes an unnecessary amount of time and energy or takes the least possible amount of time and energy. Cleaning or mopping floors is no exception. Below are some general guides for efficient cleaning of floors:

1. Use two buckets--one filled with clean warm water and one filled with water to which a synthetic detergent has been added.
2. Dip the mop into the second bucket and wring out until partially dry.
3. Start about two feet from the baseboard as shown in the illustration and then make a long stroke close to the baseboard. Use a figure 8 motion as you continue the mopping procedure. The heel of the



mop can be used to remove any stubborn spots.

4. Mop an area of about 9 x 12 feet and then rinse and dry the floor.
5. Change cleaning solution and rinse water often.
6. Clean equipment when job is completed and store in specified areas.

QUESTIONS:

Fill in the blanks with the word(s) that completes the statement.

1. The cloth used to wipe the table should be ________________, rinsed, and wrung out.
2. After wiping the table, check for any remaining sticky spots by ________________.
3. Table tops should be cleaned with a sanitizing solution at least ______________ a day.
4. Plan ahead when you are assigned to cleaning tasks and have all the ________________ you need with you.
5. The motion to be used when mopping floors is a ______________.

Match the letter of the type of floor to the suggestions for care of floors. Types of floors may be used more than once.

CARE

_____ 6. Remove spots with a cloth dampened with a liquid wax.

_____ 7. A sealer may be used in heavy traffic areas.

_____ 8. Wash with ordinary cleaning solutions.

_____ 9. Steel wool and a cleaning solution may be used to remove heavy soil.

_____ 10. Ammonia may be used to remove soil.

_____ 11. Abrasive cleaner may be used occasionally to remove soil and stain.

_____ 12. Neutral soap should be left on floor long enough to loosen soil.

_____ 13. Never use an oil mop for dusting this floor.

TYPES

A. Concrete

B. Terrazzo

C. Clay Tile

D. Rubber Tile

E. Vinyl Tile

F. Hardwood

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UNIT III-1

SAFETY PRECAUTIONS

SUBJECT: Safety Precautions

TASKS: Uses precautions necessary to avoid accidents in food service area

Wipes up any spilled food or liquid as soon as possible

Knows the location and use of the fire extinguishers

OBJECTIVES: Be able to (1) evaluate self in terms of rules of safety applied on the job
(2) recognize potential hazardous conditions
(3) describe types of fire extinguishers to use with different types of fires

REFERENCES: Required: Stokes, John W. Food Service in Industry and Institutions. Dubuque, Iowa: William C. Brown Company. 1960, pp. 186-190.

Supplementary: ________ Problem Solving: Safety and Sanitation in School Food Service. Denver, Colorado: American School Food Service Association. 1968.

Food service employees who are aware of the discomforts and waste resulting from accidents will be concerned about helping others as well as themselves in the development of safe work habits. Careless attitudes toward "safe" practices among employees may be classified into three general groups:

1. Those who do not understand the dangers in their unsafe acts.
2. Those who do not take necessary precautions.
3. Those who are physically defective, i.e., eyesight, hearing, muscular control.

Accidents result from unsafe acts and/or unsafe conditions. An injury is always the result of one or a combination of these factors. Injuries due to unsafe conditions can be definitely and permanently eliminated. On the other hand, unsafe acts involve human beings and are never entirely eliminated. Unsafe acts which may cause accidents are often a result of failure to follow instructions, use equipment properly, control temper, and get adequate rest. Have you failed in any of these?

The food service employee must develop special attitudes as well as skills so that he learns to do his job the safe way without stopping to think about it. Safe work procedures should become a habit. Three simple steps which help in establishing safety habits are:

a. start the job right by learning safe habits.
b. practice the right habits.
c. never fall back into old habits of carelessness.

In food service departments, the most common accidents are cuts, burns, falls, and injuries resulting from fires and explosions. Because food preparation and service involve the use of glass, hot liquids, sharp instruments, power-operated equipment, and hot cooking surfaces, employees are constantly working under hazardous conditions.

The following is a summary of some of the more common safety precautions to be observed by those working in food preparation or serving areas.

SAFETY PRECAUTIONS

To Avoid Electrical Shock:

1. See that electric cords are in good repair.
2. Always dry hands before touching electrical equipment.

To Avoid Burns:

1. Turn flame off when removing utensils from range.
2. Use dry pot holder for lifting hot pots and pans.
3. Be sure steam equipment is in good working order to avoid burns from leaks.
4. Have water properly regulated to avoid scalds.
5. Warn fellow workers of hot pans.
6. Keep pot handles turned toward inside of range away from traffic.
7. Raise far edge of cover when you remove lid from a steaming kettle.
8. Use tongs to put food into hot fat and to remove cooked food.

To Avoid Cuts:

1. Pick up broken glass or objects with heavy damp paper, not with bare hands.
2. Clean up and provide for proper disposal of broken dishes and glasses.
3. Place soiled knives on drain rather than in sink, and wash separately from other utensils.
4. Return safety head to slicer after each use and cleaning.
5. Use safety devices on slicers and choppers.
6. Store knives in the slotted cases provided for them.
7. Use can openers which are in good repair so they will cut sharply and leave no ragged edges.
8. Keep fingers away from moving parts.
9. Keep all cutting utensils well-sharpened.
10. Discard chipped or cracked dishes or utensils.

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To Avoid Falls:

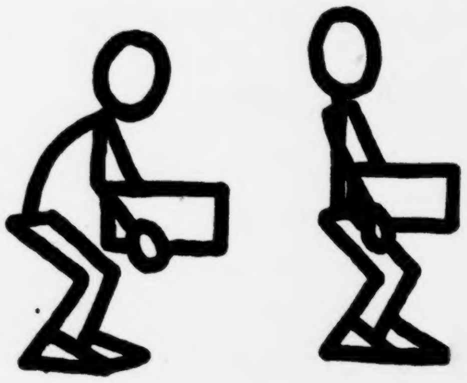
1. Keep brooms and mops in proper place.
2. Keep hallways well-lighted so that no one will trip.
3. Use stepladders which are sturdy and in good repair.
4. Keep corridors and stairways free from debris.
5. Place articles on shelves securely so they will not fall off.
6. Clean up spilled foods immediately.
7. Walk--don't run--in food service area.

To Avoid Fires and Explosions:

1. Report any suspicions of gas leaks to your supervisor.
2. Keep matches in covered metal container.
3. Know where fire extinguishers are and know how to use them.
4. See that the first aid box is fully supplied.
5. Watch hot fat carefully and store cold fat away from flame.
6. Light matches before turning on gas jets.
7. Keep kitchen and equipment clean to prevent fires caused by an accumulation of grease.

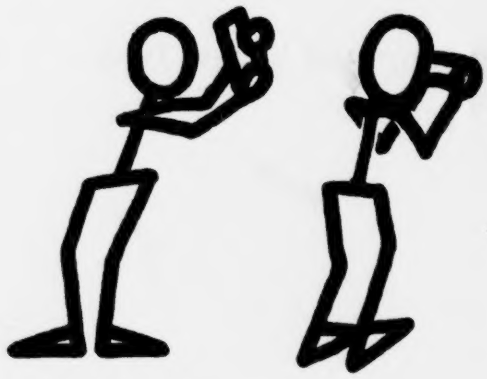
BODY MECHANICS

Lifting heavy containers of food or ingredients may lead to injuries if the lifting is not done correctly. The right way to lift involves placing the feet about twelve inches apart, squatting close to the object to be lifted, keeping the back as straight as possible, and lifting by pushing up with the leg muscles.



While carrying objects, keep the load close to the body. Never carry loads so high that vision is blocked. Put the load down by reversing the procedure used to lift it.

If a task assigned to the food service employee requires turning from one direction to another, he should be sure to turn, not twist, his body. Pivot with the feet and turn because a constant twisting motion pulls the back muscles and may strain them.



WHAT TO DO IN CASE OF ACCIDENTS

When an employee has an accident, immediate care should be given. First the accident should be reported to the supervisor, who will then probably send the employee to the first aid station, or if the accident is serious, send the employee to a doctor. Small cuts, burns, or bruises should be cared for immediately.

If it is necessary for an employee to leave the work station to find first aid, this is all right. The supervisor is interested in the health and safety of all employees. The food service employee should do his part to guard against accidents, but in case an accident occurs, he should take care of any type of injury he or his co-workers might suffer.

WHAT TO DO IN CASE OF FIRE

Serious fires occur often enough that it is important to know what to do in case of a fire. People are often injured in fires because they panic or are confused about what to do.

All employees should become familiar with the rules to follow in case of fire in their place of employment. It is also important that they become aware of the location of all exits in the areas where they work. Knowing where the nearest fire extinguisher is located may save precious minutes should a fire occur.

Use of the wrong type of fire extinguisher for a particular kind of fire may make the situation even worse. Four types of fire extinguishers and the types of fires for which they can be used are listed below:

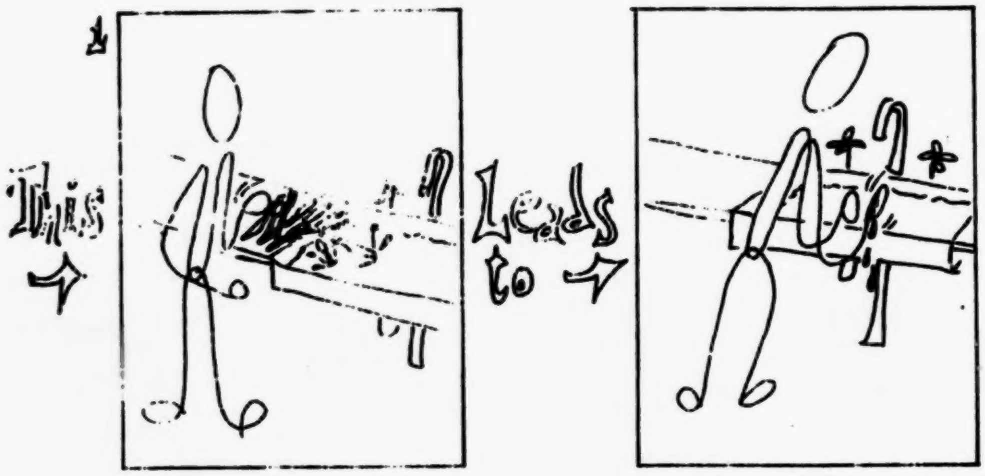
Soda-Acid Type:	Paper, wood, excelsior, cloth, and general combustible fires requiring cooling and quenching. Do NOT use on burning liquids or electrical fires; it would spread the fire or cause a deadly shock.
Carbon Dioxide Type:	Electrical fires or burning liquids where a smothering action is needed.
Dry Chemical Type:	Electrical fires or burning liquids
Pressurized Water Type:	Cloth, excelsior, paper, wood, and general fires caused by combustion. Do NOT use on burning liquids or live electrical fires; it would spread the fire or cause a deadly shock.

QUESTIONS:

WHAT IS YOUR SAFETY I.Q.?

What safety precaution is illustrated in each of the following diagrams? Refer back to the list of safety precautions on pages A-34 and A-35 if necessary.

1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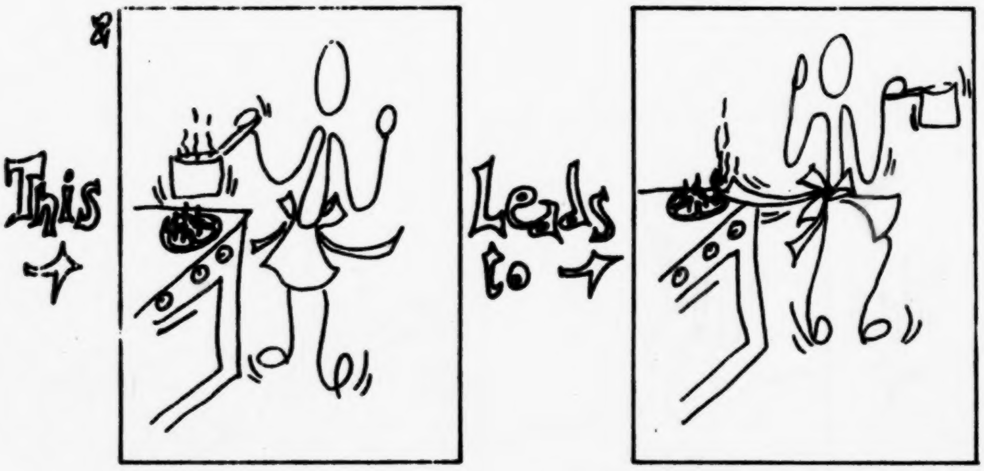
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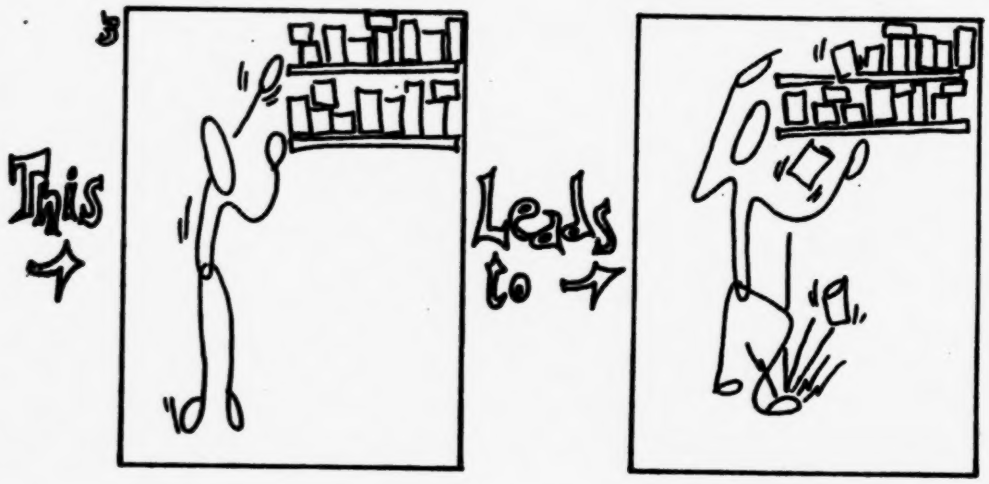
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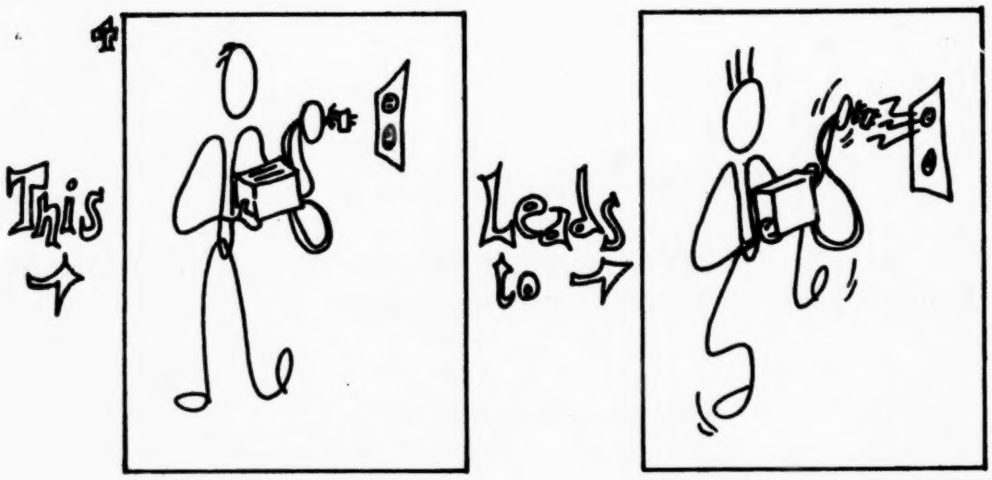
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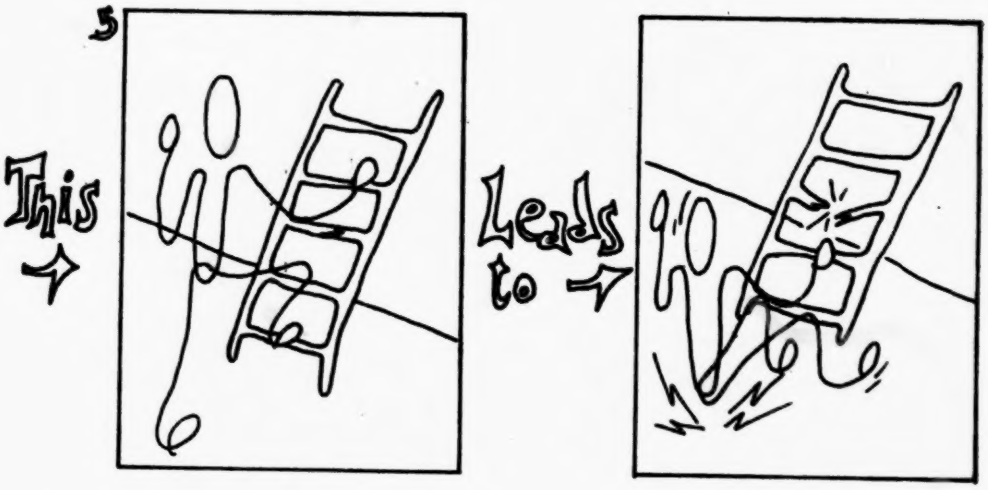
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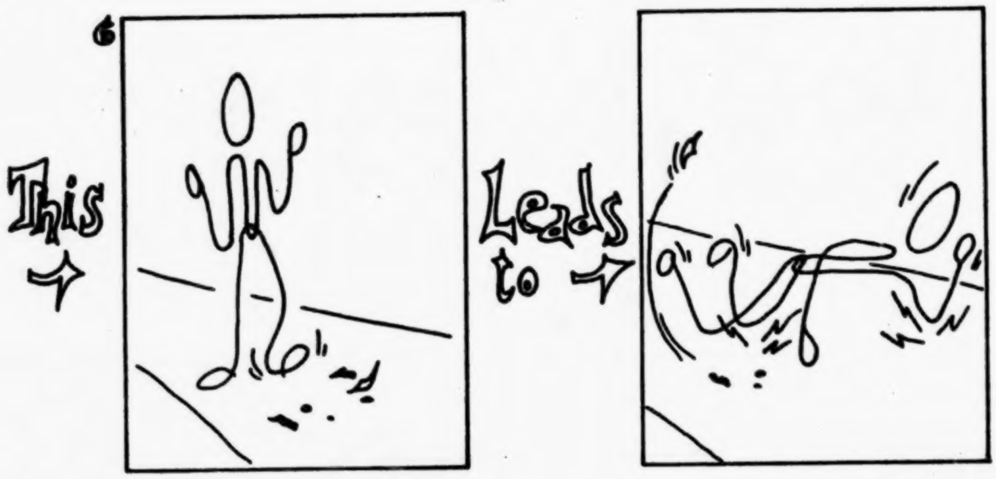
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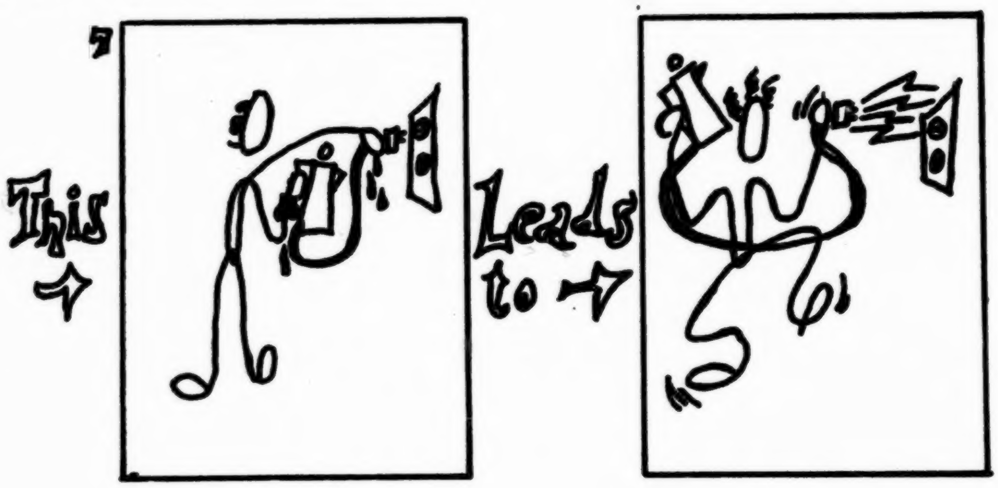

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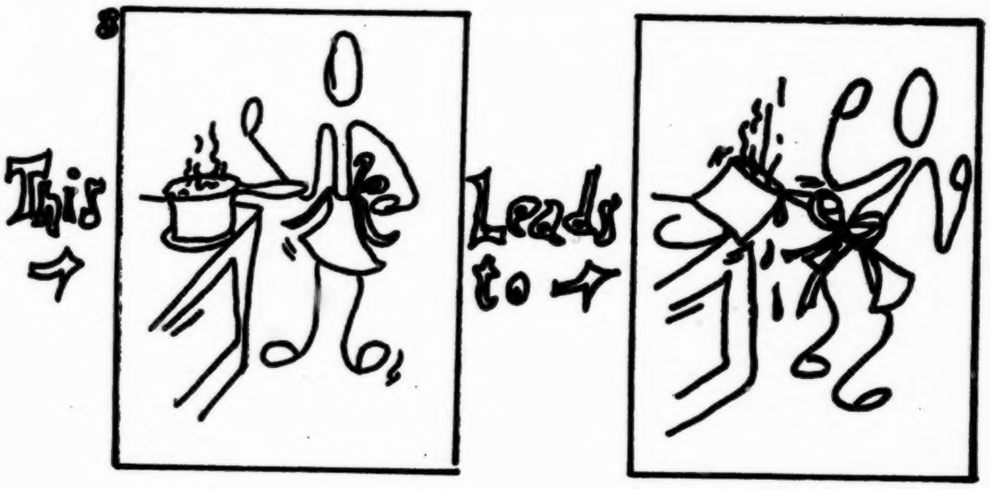

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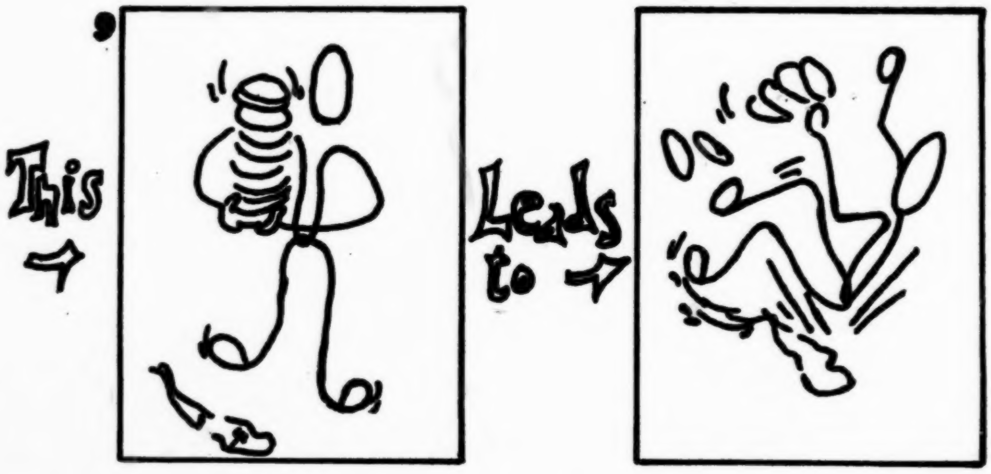


ASSIGNMENT:

I. From the preceding list of safety precautions, make a check list which might be useful to you at your training station. From observations in your work area, add others which apply specifically to your work.

II. Find out what kind of fire extinguishers are used in your place of employment. Describe the kind of fires for which they may be used and how to use them.

UNIT IV-1

COMMERCIAL KITCHEN EQUIPMENT

The kitchens in which food service employees are employed vary a great deal in the amount and kind of equipment available. Thus, some pieces of equipment may be included in this unit which you will not use in your present job, but which you may find if you change jobs. Knowing how to use many pieces of equipment may give you opportunities to perform a variety of food service assignments now and in the future.

You may find also that the equipment at your training station looks somewhat different from the illustrations in this unit. It is impossible to include all of the different types of mixers, for example, so the illustrations are typical of those most commonly used. Even though some pieces of equipment look slightly different, the same principles of use and care generally apply to most.

Information in this unit is general in nature; specific directions for use and care will be provided at your training station.

SUBJECT: Blender

TASK: Selects and correctly uses proper piece of equipment for a specified job

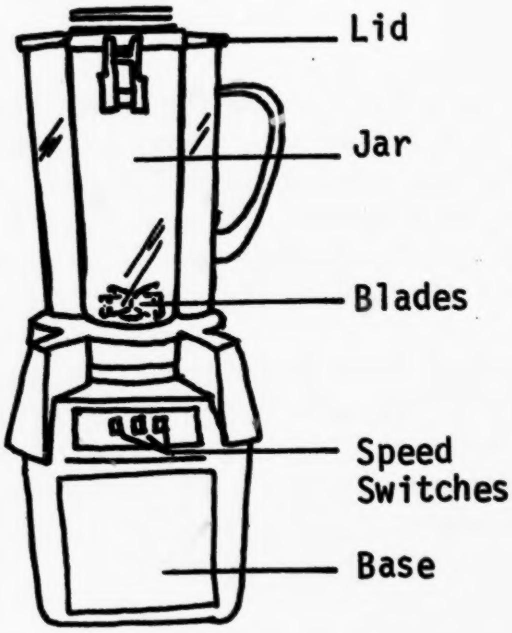
OBJECTIVES: Be able to (1) identify parts of blender
(2) list techniques in caring for blender and safety precautions to observe

Blenders are used for high speed blending, pulping, mixing, or reducing of animal tissue, vegetables, or fruits. On the following page instructions are given for the operation and care of blenders, as well as safety precautions to be observed in their use.

OPERATION

1. Place jar on base (or assembly unit). Be sure that manufacturer's instructions are followed in securing jar on base.
2. Place substances to be blended into jar.
3. Place lid on jar making sure it is secured.
4. Connect cord.
5. Turn on switch and select desired speed for substances to be blended (see manfacturer's instructions).

   NOTE: Speed may be changed without stopping machine.
6. Turn switch off as soon as ingredients are the desired consistency. Ingredients are reduced to a homogeneous mass almost immediately.



BLENDER

CARE

1. Remove jar from base. Wash and rinse using regular hand dishwashing procedure. Dry.
2. Wipe base with a damp cloth after each use. Polish with a dry cloth.
3. See manufacturer's instructions for further care, such as oiling.

SAFETY

Do not drop spoons, spatulas, or scrapers into machine while motor is on.

Be sure lid is fastened tightly.

Do not put very coarse foods or large pieces of ice in jar.

Disconnect cord when machine is not in use.

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IV-2

UNIT IV-2

COMMERCIAL KITCHEN EQUIPMENT

SUBJECT: Meat Slicer

TASK: Selects and correctly uses proper piece of equipment for a specified job

OBJECTIVES: Be able to (1) identify parts of the meat slicer
(2) describe procedure for operation of a meat slicer
(3) list safety precautions related to use of a meat slicer

The information given on the following pages is in a form called programmed instruction. The information is presented in small steps called frames. The answers to the questions asked in each frame are in the right column and opposite the next frame. Use a sheet of paper to cover the answer column and move the paper down to check your answer only after you have written your answer on scratch paper.

An asterisk (*) in front of the blank means that the answer will be more than one word. A double asterisk (**) indicates that you may answer in your own words. If no asterisk is shown, only one word is required.

Refer to Panel A on page A-52 when answering frames 1-13. You may wish to remove page A-52 from your notebook while you go through frames 1-13.

1. The part of the meat slicer labeled number 1 is called the blade or slicer knife. Number 2 is the blade guard. Part 1 is the * ________ and number 2 is the * ________.	
2. What name is given to the part labeled number 1 on the food slicer? ** ________ Number 2? * ________	1. Blade or slicer knife Blade guard

3. The blade control indicator is number 3 on the diagram. The name given to part number 3 is * ____________________.	2. Blade or slicer knife Blade guard
4. The blade control adjusts the blade to cut a certain number of slices per pound. The purpose of the blade control indicator is to ** ________________.	3. Blade control indicator
5. Write the number of each of these parts: _____ blade guard _____ blade control indicator _____ blade or slicer knife	4. Adjust the blade to cut a certain number of slices per pound.
6. Part number 4 is called the food carriage. The food is placed here when it is ready to be sliced. The place where the food goes when it is ready to sliced is called the * ____________.	5. 2 3 1
7. What is the purpose of a. the blade control indicator? ** ________________ b. the food carriage? ** ________________	6. Food carriage
8. Part number 5 is called the food holder. It pushes the food against the blade or slicer knife while it is being sliced. The name given to number 5 is * ____________ and its purpose is to ** ____________________.	7. a. Adjust blade to cut a certain number of slices per pound b. Place where food goes when it is ready to be sliced

9. Part number 6 is the gauge plate. It regulates the thickness of the slice of food. Number 6 is called the * ________.	8. Food holder Push the food against the blade or slicer knife
10. Match the letter of the function with the name of the part. _____ food holder _____ gauge plate _____ blade control indicator a. tells number of slices per pound b. pushes food against blade c. holds food while it is being sliced d. regulates thickness of slice of food	9. Gauge plate
11. The purposes of parts 7 and 8 are obvious from the names of the parts. Number 7 is the scrap tray and number 8 is the receiving tray. The part which holds the scraps is called the * ______________ and the sliced food goes onto the * ____ ______________________________.	10. b. d. a.
12. Number 9 is the "On and Off" switch. To start and stop the slicer, use the * ____________________________.	11. Scrap tray Receiving tray
13. Write the name given to each of the parts of a meat slicer. 1. 4. 7. 2. 5. 8. 3. 6. 9.	12. "On and Off" switch

14. Write the name of the part of the meat slicer which serves each of the following functions: a. starts and stops the machine ______ b. holds the food after it is sliced __ c. tells number of slices per pound ___ d. pushes food against knife _________ e. holds food while it is sliced ______ f. regulates the thickness of the slice of food _______________	13. 1. Blade or slicer knife 2. Blade guard 3. Blade control indicator 4. Food carriage 5. Food holder 6. Gauge plate 7. Scrap tray 8. Receiving tray 9. "On and Off" switch
15. Refer to Panel B on page A-48 for directions on operating a meat slicer. What two safety measures should be followed when plugging in the meat slicer? ** _________________________	14. a. "On and Off" switch b. Receiving tray c. Blade control indicator d. Food holder e. Food carriage f. Gauge plate
16. Number the following steps for operating the meat slicer in the correct order. _____ start motor _____ adjust indicator _____ slice food _____ place food in carriage	15. Be sure cord is dry and free from grease Be sure hands are dry
17. Refer to Panel C on page A-49 for safety precautions to be observed when operating a meat slicer. What procedures were violated in the following situation? Mary was assigned to the job of cleaning the meat slicer. She checked to see that the switch was off and pulled the cord to unplug the slicer. She used very hot water to clean the frame of the slicer and was careful not to let the water come in contact with the motor. Some food particles were still on the slicer knife so she used a knife to remove them. ** ____________________.	16. 3 2 4 1

18. When the machine is not in use, the plug should be * ______________.	17. Did not use plug to pull cord Used very hot water Used knife to clean slicer knife
19. Instructions for cleaning a meat slicer are given in Panel D on pages A-50 through A-51. Read and then complete the following frames. Where should the blade control indicator be set before parts of the slicer are removed? * ___________.	18. Pulled or out of the socket
20. What kind of solution is used for cleaning the blade and other parts? * ____________________	19. At zero
	20. Hot detergent solution

PANEL B

HOW TO OPERATE A MEAT SLICER[1]

WHAT TO DO	HOW TO DO IT
1. Put plug into outlet	1. Plug in. NOTE: Be sure cord is dry and free from grease to avoid short circuits. Be sure that hands are dry to prevent shock.
2. Place food in carriage	2. Place food in carriage and hold it firmly in place by means of food holder.
3. Adjust indicator	3. Adjust blade control indicator for desired thickness of slice.
4. Start motor	4. Turn switch on.
5. Slice food	5. Move carriage back and forth across blade, using handle. NOTE: Develop a rhythmic motion--do not bang carriage.

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[1] U.S. Department of Agriculture. Training Course Outline on Use and Care of Equipment. Washington, D.C.: U.S. Government Printing Office. May, 1960, pp. 86-90.

PANEL C

CAUTIONS AND GUIDES IN OPERATING A MEAT SLICER

The operation of a meat slicer will vary according to the make and model. The manufacturer's instructions should be followed to obtain the best performance from the slicer and to assure long life of the machine.

1. When cleaning a slicer, do not let water come in contact with the motor or electrical wiring.
2. Never use slicer when blade guard is off.
3. Always keep hands away from blade when machine is in operation.
4. Keep plug out of socket when machine is not in use. Be certain guard is on slicer before putting plug in socket.
5. Always make certain the switch is off and the plug pulled out of the socket before starting to clean.
6. When disconnecting the slicer, be careful to pull the plug--do not pull the cord.
7. Never use a metal instrument to scrape off food particles from slicer knife as a nicked blade tears food.
8. Do not use very hot water or steam in cleaning slicer as too much heat may reduce the lubricants in important parts.

PANEL D

HOW TO CLEAN A MEAT SLICER

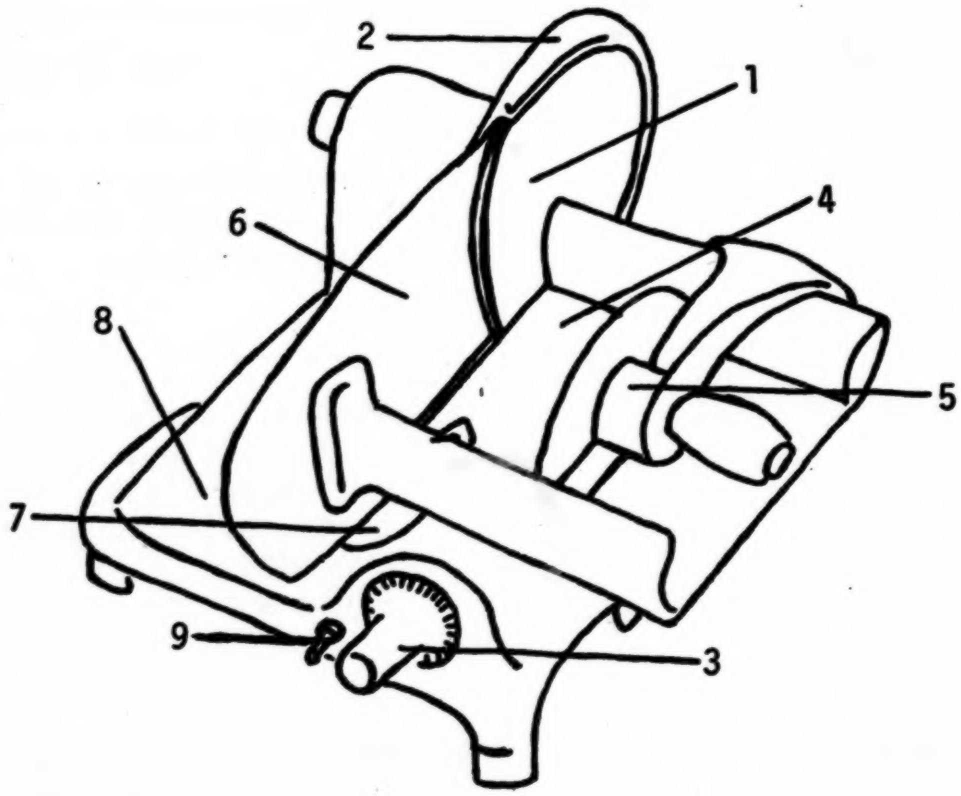
CAUTION: Instructions given below are general. Read and follow manufacturer's directions carefully.

WHAT TO DO	HOW TO DO IT
DAILY CLEANING:	
1. Remove parts	1. Remove electric cord from outlet. Set blade control indicator at zero. Remove parts following manufacturer's instructions.
2. Clean blade	2. Wipe gauge plate with hot detergent solution. Rinse and dry. NOTE: Keep hands clear of blade edge. Wipe entire blade with a heavy cloth that has been folded and dampened with hot detergent solution, using long-handled hook if provided. Wipe from center toward edge of blade. Rinse and dry with clean, heavy cloth.
3. Clean and replace guard	3. Wash blade guard in hot detergent solution. Rinse and dry. NOTE: Replace blade guard immediately to prevent injury.

WHAT TO DO	HOW TO DO IT
4. Clean other parts	4. Wash other parts of the slicer in hot detergent solution. Rinse and dry.
5. Clean frame and base	5. Wash all surfaces with hot detergent solution. Clean under blade with damp cloth. Push cloth under blade, using long-handled hook if provided. Rinse and dry.
6. Replace parts	6. Replace parts following manufacturer's instructions.
7. Cover slicer	7. Cover with plastic or clean towel.
WEEKLY CLEANING: (To supplement daily cleaning) 1. Clean entire slicer	1. Clean thoroughly following instructions for daily cleaning. NOTE: Be sure to clean area under slicer.

PANEL A

MEAT SLICER WITH GUARD



Home Economics
Instructional Materials Center
Lubbock, Texas

UNIT IV-3

COMMERCIAL KITCHEN EQUIPMENT

SUBJECT: Mixer

TASK: Selects and correctly uses proper piece of equipment for a specified job

OBJECTIVES: Be able to (1) identify parts of a mixer and their functions
(2) describe procedure for operation of a mixer
(3) list safety precautions related to use of a mixer

The information given on the following pages is in a form called programmed instruction. The information is presented in small steps called frames. The answers to the questions asked in each frame are in the right column and opposite the next frame. Use a sheet of paper to cover the answer column and move the paper down to check your answer only after you have written your answer on scratch paper.

An asterisk (*) in front of the blank means that the answer will be more than one word. A double asterisk (**) indicates that you may answer in your own words. If no asterisk is shown, only one word is required.

Refer to Panel E on page A-71 when answering frames 1-11. You may wish to remove page A-71 from your notebook while you go through frames 1-11.

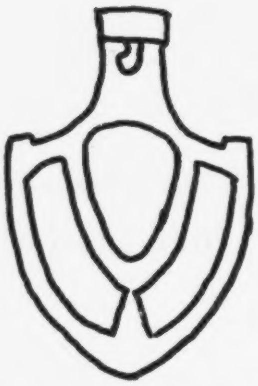
MIXERS

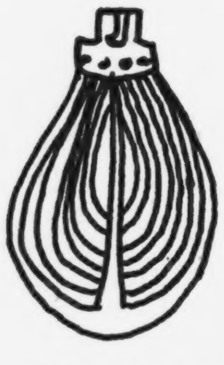
Two types of mixers are illustrated in Panel E (see page A-71). The large 30-60 quart floor model mixer is used for mixing and blending ingredients or for incorporating air into the product. The smaller 12-20 quart, bench model and the 5 quart table model are used for mixing, creaming, or beating ingredients for cakes, batters, doughs, pastries, or meringues.

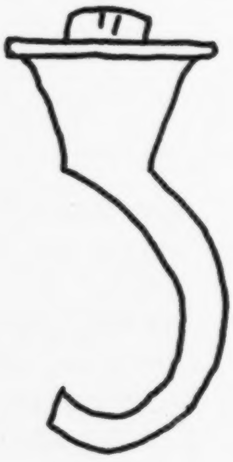
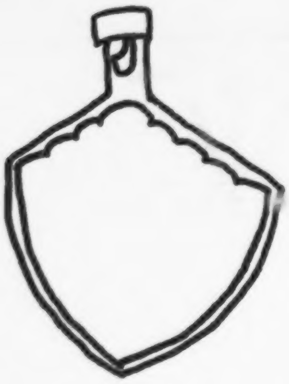
1. Number 1 in the diagrams is the bowl and number 2 is the bowl support. The parts labeled 1 and 2 are the ______________ and * ____________.	

2. Number 3 is called the beater shaft and is the point at which the beater is attached. The name of the part to which the beater is attached is the * ________________.	1. Bowl Bowl support
3. Give the names for parts 1 ____________ 2 * ____________ 3 * ____________	2. Beater shaft
4. The name given to part number 4 explains its purpose. It is the bowl raising wheel or lever. When you want to raise or lower the bowl, use the * ________________.	3. Bowl Bowl support Beater shaft
5. The name given to part 4 is * ____________.	4. Bowl raising wheel or lever
6. Although they look different, both mixers used in the home and in institutions have a gear or speed control. Number 5 is used to adjust the speed of the mixer and is called the * ________________.	5. Bowl raising wheel or lever
7. Attachments are put on the mixer at part number 6, the attachment socket. Number 6 is called the * ________________.	6. Gear or speed control
8. Number 5 is the * ____________ and number 6 is the * ____________.	7. Attachment socket
9. Without number 7, the mixer would be useless. It is the "Off and On" switch. To start and stop the mixer, use the * ________________.	8. Gear or speed control Attachment socket

10. Match the parts with the number. _____ 1 a. Attachment socket _____ 2 b. "Off and On" switch _____ 3 c. Bowl _____ 4 d. Bowl raising wheel or lever _____ 5 e. Beater shaft _____ 6 f. Gear or speed control _____ 7 g. Bowl support	9. "Off and On" switch
11. Write the names of the parts of the mixer: ** 1 _______ 2 _______ 3 _______ 4 _______ 5 _______ 6 _______ 7 _______	10. c g e d f a b
12. Four different agitators may be used with the mixer, each for a certain type of mixing. Each has a special use. It is important to choose the right one for the job to be done. For each type of mixing to be done, there is (one, more than one) _______________ agitator to use.	11. Bowl Bowl support Beater shaft Bowl raising wheel or lever Gear or speed control Attachment socket "Off and On" switch

13.  Flat Beater The flat shape of this beater gives a clue to its name. It is called the _________ beater.	12. One
14. The flat beater is used for general mixing but not for heavy doughs. The flat beater is used mainly for *__________________________.	13. Flat
15. Examples of general mixing tasks for which the flat beater can be used are: (1) Mixing batters, such as cakes, muffins, steamed puddings (2) mashing potatoes and other vegetables (3) creaming mixtures (4) mixing main dishes such as hamburger For which of the following tasks would the flat beater be suitable? _____ a. mashing squash _____ b. making orange muffins _____ c. making yeast breads _____ d. whipping cream _____ e. mixing ham loaf	14. General mixing
16. What are two of the four types of general mixing tasks for which the flat beater can be used? *____________________ *____________________	15. a b e

17.  Wire Whip This agitator is called the wire whip and is used for incorporating air into light mixtures. The name given to this agitator is *____________________.	16. Any two of these four: mixing batters creaming mixtures mashing vegetables mixing main dishes
18. The wire whip is used for all light, fast operations in which air is to be incorporated into the product. For which of these tasks would you use the wire whip? _____ a. beating egg whites _____ b. mixing biscuits _____ c. whipping cream _____ d. creaming butter and sugar _____ e. whipping dry milk _____ f. whipping light frostings	17. Wire whip
19. Which beater would you use for each of these tasks: _____ a. mixing a chocolate cake _____ b. reconstituting dry milk _____ c. creaming butter and sugar for a cookie recipe 1. flat beater 2. wire whip	18. a c e f

20.  Dough Hook The shape of this agitator is also reflected in its name. This agitator is called the * ____________.	19. 1 2 1
21. The dough hook is used for mixing heavy doughs, such as bread and roll dough, which requires a folding and stretching action. The dough hook is mainly used to mix ________ and ______________.	20. Dough hook
22. The wire whip is used mainly for ** ________. The dough hook is used for ** _____________.	21. Bread Rolls
23.  Pastry Knife A fourth agitator is shown in the illustration. This agitator is called the * _________.	22. Beating air into light mixtures Mixing heavy doughs
24. The pastry knife is used for combining shortening and flour by a cutting action. Biscuits, pie crust, and short cake are made using it. The purpose of the pastry knife is to combine * _________________.	23. Pastry knife

25. The dough hook is used to make __________ and _________, while the pastry knife is used for ____________ and __________.	24. Shortening and flour by a cutting action
26. Match the task with the most suitable agitator. _____ mixing prune cake 1. flat beater _____ making crust for apple pie 2. wire whip 3. dough hook _____ whipping 7-minute icing 4. pastry knife _____ mixing cinnamon rolls _____ making meringue for lemon pie _____ mixing biscuits _____ mashing squash	25. Bread and rolls Biscuits and pie crusts
27. As you might guess, the mixer is set at faster speeds when the wire whip is used for whipping purposes than it is when the dough hook is used for heavy mixtures. If number 1 speed is low, number 2 is intermediate, and number 3 is high, which speed setting would you use for the following tasks? _____ beating eggs, whipping cream _____ creaming mixtures, mashing potatoes, blending salad dressings _____ mixing dry, heavy, or liquid ingredients	26. 1 4 2 3 2 4 1
28. High speed (number 3) is used for (light, heavy) _________ mixtures and low speed (number 1) is used for (light, heavy) ______ mixtures.	27. 3 2 1

29. When should the low speed be used? ** ________ high speed? ** ________	28. Light Heavy
30. Proper use of equipment is necessary for satisfactory performance and lasting service. Study Panel F on How to Operate a Food Mixer.	29. For heavy mixtures For light mixtures

PANEL F

HOW TO OPERATE A FOOD MIXER

CAUTION: Instructions given below are general. Read and follow the manufacturer's directions carefully.

WHAT TO DO	HOW TO DO IT
1. Place bowl	1. Select appropriate size bowl. Place bowl on bowl support. (Be sure the lugs fit over the retaining pins on each side of bowl support and then clamp.) If the 30-quart bowl is used, an adapter will need to be placed over the bowl support of the mixer before the bowl is put in place.
2. Fill bowl	2. Place ingredients in bowl as recipe directs (1/2 to 2/3 capacity for best results).
3. Select beater	3. Choose agitator appropriate for desired use. Be sure you have the proper agitator for the size bowl you are using.
4. Insert beater	4. Insert shaft of agitator onto beater shaft. Fit slot in agitator shaft over pin extending from hub and adjust until it is in the locked position.

WHAT TO DO	HOW TO DO IT
5. Raise bowl	5. Raise bowl into position by means of bowl raising wheel or lever. Agitator should not touch bowl.
6. Start machine	6. For belt driven machine, adjust speed control and switch to "on" position. For gear driven machine, be sure gear is in neutral--push it away from you. Press start button and set gear to speed required by recipe. It is advisable to start at speed 1, then adjust to higher speeds if necessary. For gear driven machine, always put clutch lever into neutral before changing speeds. Beat or mix the required length of time.
7. Stop machine	7. For belt driven machine, switch to "off" position. For gear driven machine, shift to neutral gear and push "stop" button.
8. Lower bowl	8. Use bowl raising wheel or lever to lower bowl.
9. Remove beater and food	9. Remove beater by turning it around until the pin on the hub slips out of the slot in the beater shaft. Remove bowl.

31. Is the bowl raised into position before or after the ingredients are added?

____

32. List the 9 steps in operating a food mixer. ** ________	31. After
33. During the mixing process, the mixer is stopped and the bowl is lowered before scraping down the sides of the bowl. What two things are done before using a spatula to scrape the sides of the bowl? ** ________	32. Place bowl Fill bowl Select beater Insert beater Raise bowl Start machine Mix ingredients Stop machine Lower bowl Remove beater and food
34. What needs to be done before you scrape the sides of the bowl? ** ________	33. Stop the mixer and lower the bowl
35. Safe operation of a food mixer is a must. Never scrape down the side of the bowl or loosen material on the bottom without first stopping the machine. What must always be done before scraping the bowl? * ________	34. Stop the mixer and lower the bowl
36. When you add ingredients while the mixer is in operation, be sure to pay close attention to what you are doing or you may drop both the utensil and ingredients in the mixer. What might happen if you take your eyes away from what you are doing? ** ________	35. Stop the machine

37. Here are some other safety practices to observe.

    a. Select the correct bowl for the type of mixture and then select correct beater or whip according to bowl size and mixture.

    b. Be sure to fasten bowl and beater or whip securely before starting the motor.

    c. Do not put hands or spoons into bowl while the mixer is in operation.

    d. Always use a rubber scraper, flexible spatula, or long-handled spoon to scrape down sides of bowl and to remove food from beater or whip.

    e. Use mixing bowls for mixing only--do not put them on the range or in the oven.

    f. If mixer is used on continuous basis, always allow time for motor to cool. Most mixers operate at a capacity load for one hour without overheating or damaging the motor.

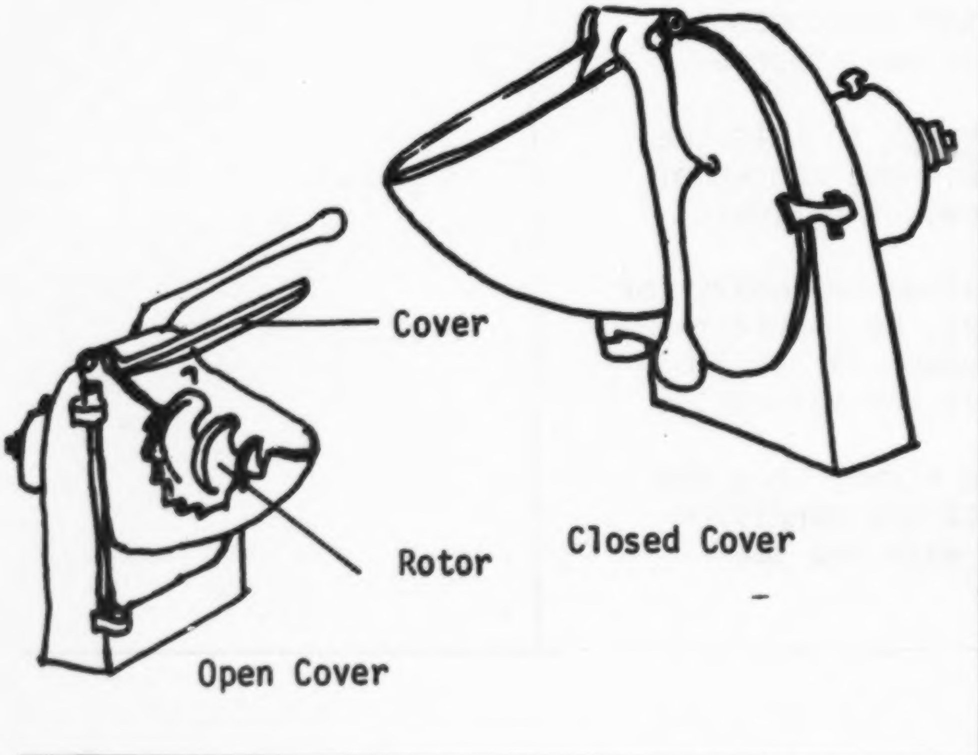
    g. Remove agitators and attachments only when the motor has stopped.

    h. Use bowls large enough to hold the food to be mixed without danger of it slopping over onto the floor.

    i. Do not use a container too heavy for you to handle safely by yourself unless wheeled equipment is available for moving the bowl and materials.

    j. Should an overload occur, stop the machine and correct the condition before continuing with the job.

36. Might drop utensil in the mixer

38. Study Panel G (on page A-65 on How to Clean a Food Mixer before answering questions 38 and 39. Briefly, what daily cleaning is recommended for the machine? ** ____________ for the parts? ** ____________ What weekly cleaning is recommended? ** ____________	
39. What temperature water should be used for soaking egg mixtures or flour batters from the mixer? * ____________	38. Clean machine daily, rinse and dry; scrape and brush out groove on beater shaft Wash, rinse, and dry parts immediately after use Clean entire mixer weekly in same manner as for daily cleaning
40. In addition to the various agitators which can be used on food mixers, there are attachments which can be used with the mixer. One of these is the vegetable hopper. The attachment shown here is the * ____________.  	39. Cold water

PANEL G

HOW TO CLEAN A FOOD MIXER[2]

CAUTION: Instructions given below are general. Read and follow the manufacturer's directions carefully.

WHAT TO DO	HOW TO DO IT
DAILY CLEANING:	
1. Clean machine	1. Immediately after use, clean bowl support, beater shaft, shell, and base with hot detergent solution. Rinse and dry with clean paper towels. Scrape and brush out groove on beater shaft if necessary.
2. Clean parts	2. Wash bowl and beaters immediately after using. (If egg mixtures or flours batters have been used, apply cold water before washing with hot water.) Rinse and dry beaters thoroughly and hang up to prevent bending. Rinse and dry bowls thoroughly to prevent rusting.
WEEKLY CLEANING: (to supplement daily)	
1. Clean entire mixer	1. Clean thoroughly following instructions for daily cleaning.

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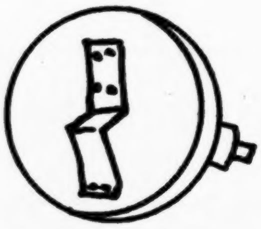
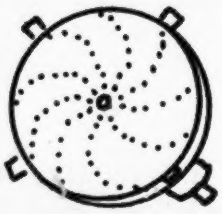
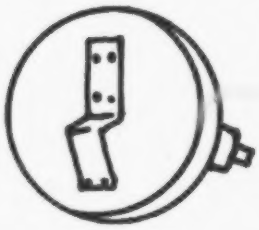
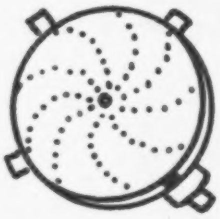
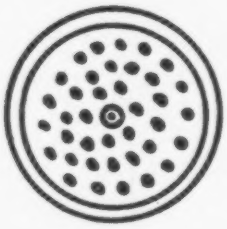
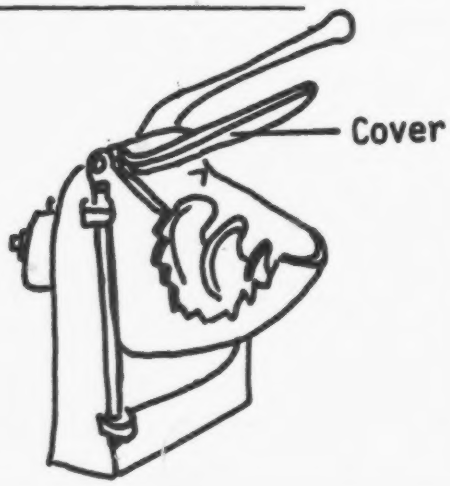
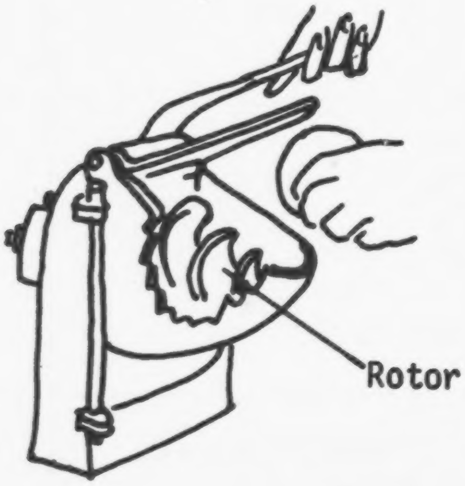
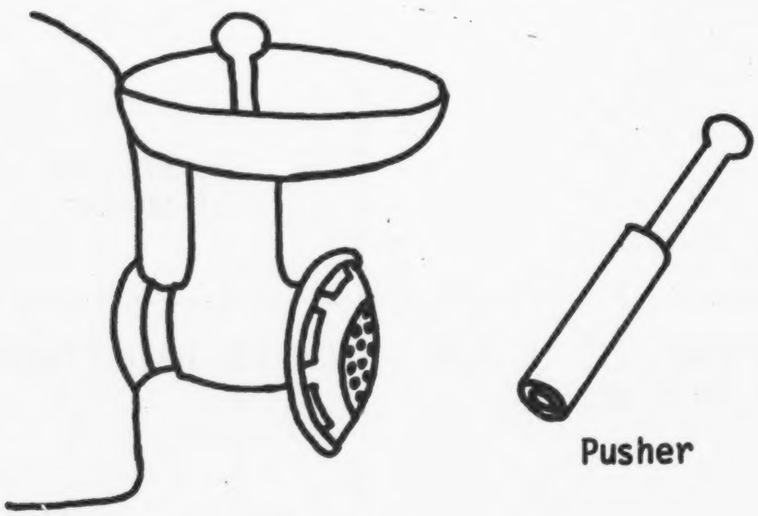
[2] U.S. Department of Agriculture. Training Course Outline on Use and Care of Equipment. Washington, D.C.: U.S. Government Printing Office. May, 1960, p. 79.

41. One of the plates which can be used with the vegetable hopper is shown in the illustration. It is called the ______ plate.  Slicer Plate	40. Vegetable hopper
42. The slicer is used to (1) slice vegetables for salads and soups, (2) slice firm fruits, such as apples for salads, and (3) slice other vegetables, such as potatoes for scalloping and cabbage for steaming. Thus, the main use of the slicer plate is *______ ______	41. Slicer
43. HINT: Fasten a plastic bag to the machine to catch the food. It is easy to fill, easy to store in refrigerator, reduces discoloration of vegetables, and keeps food moist.	42. To slice fruits and vegetables
44. A second plate to use with the vegetable hopper is the grater plate. The plate with the curved lines of holes is the ______ plate.  Grater Plate	
45. Obviously, the grater plate is used for grating (1) hard vegetables, such as carrots, (2) dry bread crumbs, and (3) hard cheese. The grater is used for ** ______.	44. Grater

46. What are the names of the vegetable hopper plates shown below? a. __________ b. __________  a.  b.	45. Grating vegetables, bread, and cheese
47. HINT: Use a stiff brush to clean the plates. Toast bread to a golden brown before grating.	46. a. Slicer b. Grater
48. The third plate is the shredder, which comes in several sizes. How does the shredder differ in appearance from the grater? ** ____________________  Shredder Plate	
49. What do you suppose the shredder is used for? __________ Can you think of a specific food? ** ______________	48. The holes are placed all over the plate
50. HINT: Shredding onions into a plastic bag reduces eye and nose irritation.	49. Shredding Cabbage or any firm vegetable

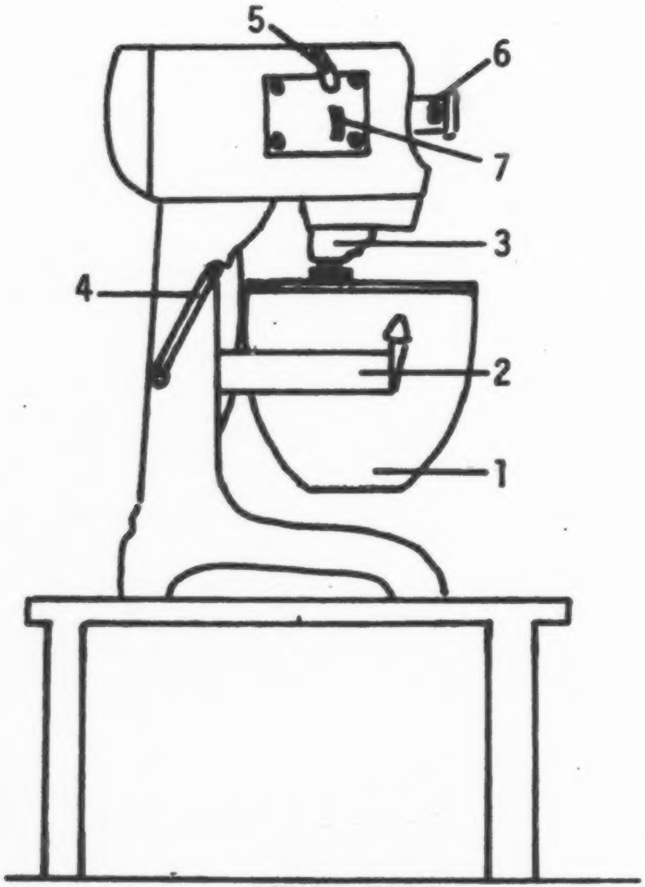
51. The purpose of the vegetable hopper cover is to force the food through the hopper. When shredding, use light pressure to prevent mashing of vegetables. What kind of pressure should be used when shredding? __________ Why? ** ________________  	
52. The rotor or auger in the hopper turns to force the food through the plate. What might happen if you add food while the rotor is in motion? * __________ What safety precaution could you give in regard to adding food to the hopper? ** ______________  	51. Light To prevent mashing of vegetables
53. The three plates which can be used with the hopper are the ___________, ___________, and ____________.	52. Finger might get caught in hopper Never put your fingers into the hopper while the rotor is revolving!

54.  Meat and Food Chopper Refer to illustration. Another attachment which can be used on the food mixer is the * ________________.	53. Slicer Grater Shredder
55. The chopper is used for chopping or grinding meats for croquettes, loaves, and meat patties. It can be used also to chop vegetables, dry fruits, cheese, dry bread, and hard cooked eggs. Foods which can be chopped with the chopper are ________, ________, __________, __________, ___________, _________.	54. Meat and Food Chopper
56. The most important safety precaution to observe when using the meat and food chopper is to use the stomper or pusher--never your hands--to push the food through the chopper. What should never be done when using a meat and food chopper attachment? * ____________	55. Meat Vegetables Fruits Cheese Bread Hard cooked eggs

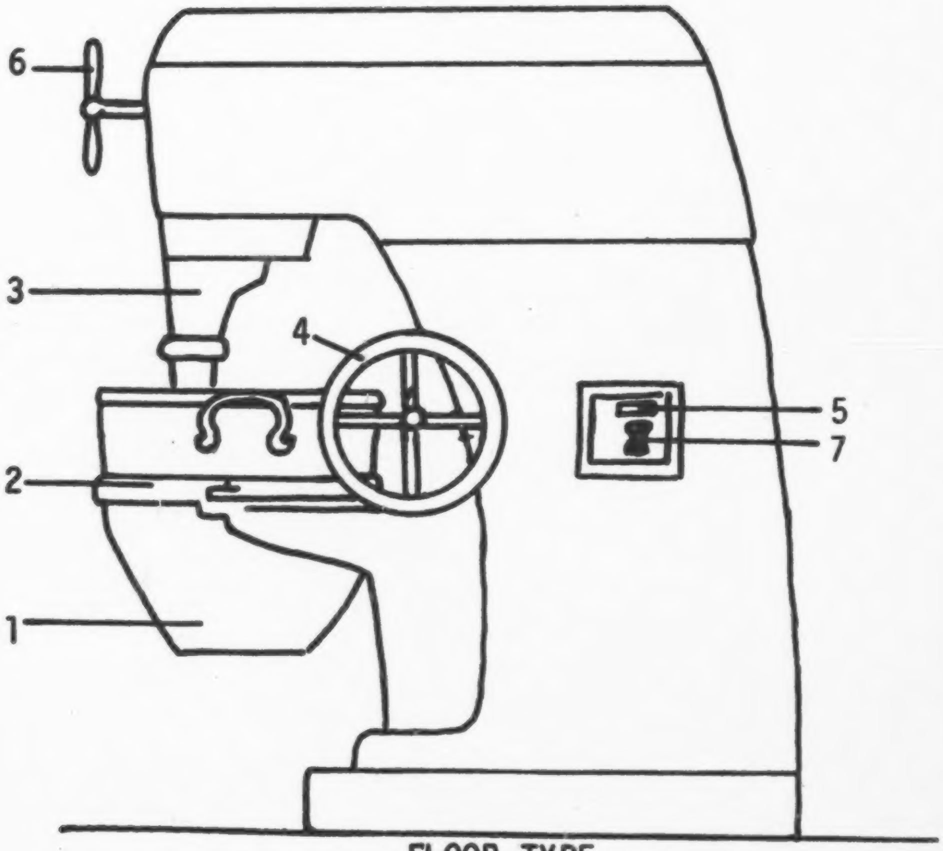
57. After use, parts of the chopper should be disassembled and washed with hot water and a mild detergent to prevent growth of bacteria. Why is it important to clean the chopper thoroughly after use? ** ________________________	56. Push food or meat through the chopper WITH YOUR HANDS!
	57. To prevent growth of bacteria

ASK YOUR TEACHER FOR PART I OF THE UNIT IV TEST. WHEN YOU HAVE FINISHED THE TEST, GO ON TO THE REST OF THIS UNIT.

PANEL E



BENCH TYPE



FLOOR TYPE

UNIT IV-4

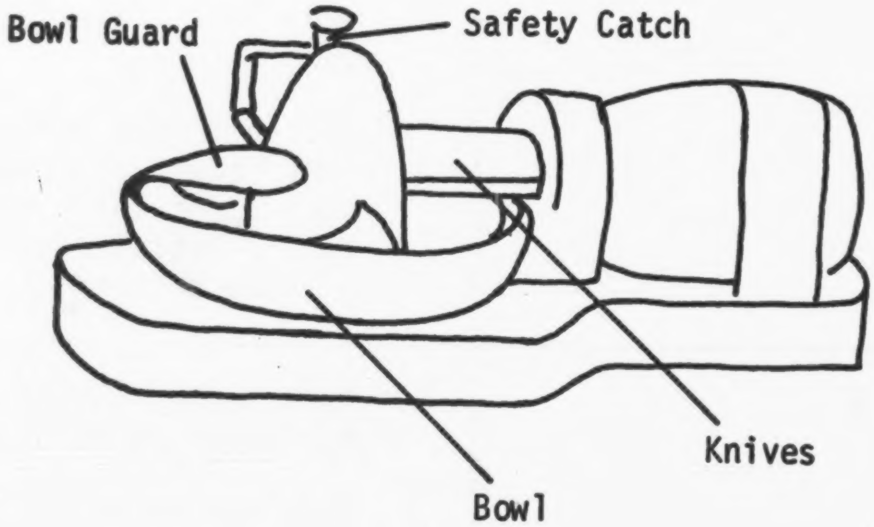
COMMERCIAL KITCHEN EQUIPMENT

SUBJECT: Food Cutter or Chopper

TASK: Selects and correctly uses proper piece of equipment for a specified job

OBJECTIVES: Be able to (1) identify parts of the food cutter or chopper
(2) describe procedures for operation and care of food cutter
(3) list safety precautions related to use of a food cutter or chopper

FOOD CUTTER OR CHOPPER



Bowl guard

Removable bowl

Knives

HOW TO OPERATE A FOOD CUTTER OR CHOPPER[3]

CAUTION: These instructions are general. Read and follow manufacturer's directions carefully.

WHAT TO DO	HOW TO DO IT
1. Inspect Cutter	1. See that machine is assembled completely with all parts securely in place. Where clamp nuts are used, see that they are turned to hold bowl guard in place.
2. Start motor	2. Push "start" button or move switch to "start."
3. Fill bowl	3. Feed food into bowl gradually. Never fill bowl over 2/3 full. Never use fingers to push food under blades. Moving in the direction opposite to bowl rotation, scrape food down with large spoon from outer edge toward bottom of bowl to insure uniform cutting.
4. Remove food	4. Push "stop" button or move switch to "stop" position. Wait for knives to stop rotating. CAUTION: Knives will continue to rotate rapidly several seconds after machine is turned off. Throw safety catch. Remove food from exposed part of bowl. Raise guard and remove remaining food.

WHAT TO DO	HOW TO DO IT
5. Prepare for next operation	5. Hold knives to prevent rotation and wipe blades cautiously. Wipe out bowl. Rinse knife guard, dry, and replace. Tighten clamp nuts and levers for next operation. Leave safety catch in disengaged operation.

SAFETY PRECAUTIONS

1. Never put hands in bowl when in use.

2. Wait until knives have stopped revolving before removing food or cleaning.

3. Do not overload bowl; fill 2/3 full.

4. Use large spoon rather than hand to guide food into cutters--move in direction opposite to bowl rotation.

5. Do not use for cutting meat with bones or gristle to do so damages knives and gears.

6. After cleaning, make sure knives are replaced in the proper position.

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[3] U.S. Department of Agriculture. Training Course Outline on the Use and Care of Equipment. Washington, D.C.: U.S. Government Printing Office. May, 1960, pp. 59-62.

HOW TO CLEAN A FOOD CUTTER OR CHOPPER[3]

CAUTION: Instructions given below are general. Read and follow manufacturer's directions carefully.

WHAT TO DO	HOW TO DO IT
DAILY CLEANING:	
1. Remove parts	1. Push switch to "off" position. DANGER: WAIT FOR KNIVES TO STOP REVOLVING. Release safety catch holding bowl guard in place. Lift guard and remove.
2. Clean knives	2. Unscrew wingnut and remove blades from motor shaft. Clean cautiously and carefully with hot detergent solution, using dish mop or sponge with handle. Rinse and dry.
3. Clean bowl guard	3. Remove all food particles, paying particular attention to area around guard. Wash with hot detergent solution. Rinse and dry.
4. Clean bowl	4. If removable, remove and wash other parts. If fixed, wipe out food particles and clean with hot detergent solution. Rinse and dry.

WHAT TO DO	HOW TO DO IT
5. Clean parts	5. Wash small parts in hot detergent solution. Rinse and dry.
6. Reassemble	6. Replace guard. Attach bowl to base. Reattach knife blades to shaft. Drop guard into position.
7. Clean under surface	7. If bowl is not removable, clean under surface. Wash table or pedestal with hot detergent solution. Rinse and dry.

QUESTIONS:

1. When operating a food chopper, what two things should be checked before the motor is started?
2. How should food be fed into the machine? How full should the bowl be filled? What safety precaution should be observed when filling the bowl?
3. What can be done to insure uniform cutting?

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[3] U.S. Department of Agriculture. Training Course Outline on the Use and Care of Equipment. Washington, D.C.: U.S. Government Printing Office. May, 1960, pp. 59-62.

4. Why would it be dangerous to remove food from chopper immediately after the "stop" button is pushed?

5. What needs to be done to the chopper after the food is removed?

6. What should be used to guide food into the cutters? In what direction should food be guided?

7. Why should meat with bones or gristle not be cut in the food chopper?

8. What are the steps in reassembling the food cutter after it has been cleaned?

UNIT IV-5

COMMERCIAL KITCHEN EQUIPMENT

SUBJECT:	Individual Toaster
TASK:	Selects and correctly uses proper piece of equipment for a specified job
OBJECTIVE:	Be able to list procedures for using and caring for a small electric toaster

Parts of the Toaster

The small electric toaster is a commonly used electrical appliance in food service establishments. The essential parts of the toaster include:

1. a heating element, which is insulated within a frame.
2. an appliance cord, which carries the current from the branch circuit.

Toasters vary in convenience features, such as removable crumb trays, toast ejectors, and regulators for degree of brownness.

Cleaning Procedures

The toaster should be kept clean by wiping off the outside with a soft damp cloth. If the toaster is greasy, use a non-abrasive cleaning compound. The compound or water should not touch the electrical element. The crumb tray should be cleaned daily, observing the safety precautions listed below.

Safety Precautions

* Always disconnect the cord when cleaning the toaster.

* If a piece of bread becomes lodged inside, always disconnect the cord before attempting to remove the bread.

* Be sure your hands are dry when operating the toaster.

QUESTIONS:

Write the letter of the correct answer on your answer sheet.

1. An essential part of the toaster is
   a. the heating element which is insulated in a frame.
   b. a series of transistors.
   c. an extension cord.

2. Convenience features of toasters include
   a. regulators for degree of brownness.
   b. removable crumb trays.
   c. toast ejectors.
   d. all of these.

3. Toasters should be kept clean by wiping off the outside with
   a. a soft, damp cloth.
   b. a rough, dry cloth.
   c. an oil treated cloth.

4. If the toaster is greasy, clean it with
   a. a steel wool pad.
   b. a non-abrasive cleaner.
   c. a scouring powder.

5. The cleaning compound or water should not touch the
   a. regulator.
   b. crumb tray.
   c. electrical element.

6. When cleaning or working with the toaster, always
   a. be sure it is turned off.
   b. check the regulator.
   c. disconnect it.

7. When operating the toaster, be sure hands are
   a. dry.
   b. wet.
   c. oiled.

m

UNIT IV-6

COMMERCIAL KITCHEN EQUIPMENT

SUBJECT: Conveyor Toasters

TASK: Selects and correctly uses proper piece of equipment for a specified job

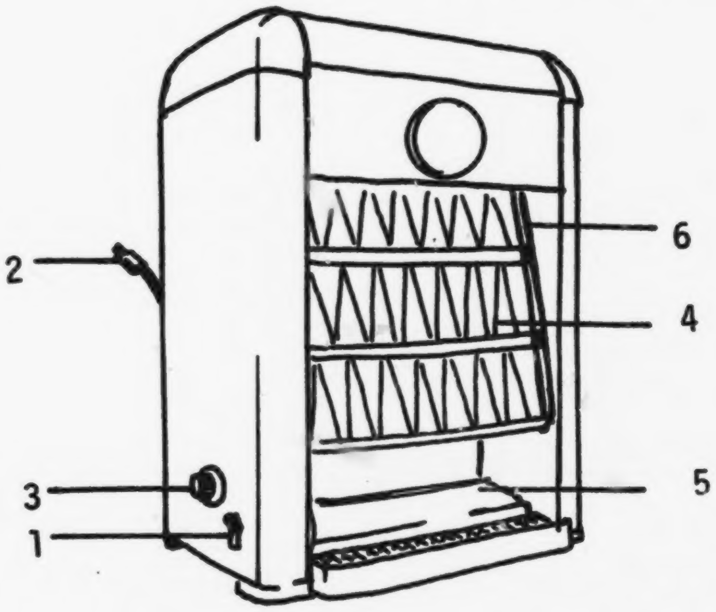
OBJECTIVE: Be able to describe procedure for operating and caring for conveyor toasters

Conveyor toasters are used for toasting large amounts (approximately one loaf) of bread at a time. Following are instructions for the safe operation and care of toasters:

OPERATION

ELECTRIC:

1. Set starter switch (1) at off.
2. Plug in electric plug (2).
3. Turn starter switch (1) on and off to be sure conveyor (6) runs smoothly.
4. Set thermostat dial (3) at 7.
5. Preheat for 20 minutes.
6. Test run a few slices of bread.
7. Adjust thermostat dial (3) as needed.
8. Place bread in toast baskets (4).



CONVEYOR TOASTER

CARE

DAILY:

1. Wipe outside.
2. Remove crumbs.
3. Remove toast chute (5) and clean base.

MONTHLY:

1. Use non-abrasive cleaning compound on outside.
2. Boil baskets.

SAFETY

Keep fingers clear of elements as toaster is loaded.

Remove plug from electrical outlet when toaster is not in use.

QUESTIONS:

1. What daily cleaning should be given to the toaster?
2. What kind of cleaning compound should be used on the outside of the toaster for monthly cleaning?
3. Give two safety precautions to observe when using a conveyor toaster.

UNIT IV-7

COMMERCIAL KITCHEN EQUIPMENT

SUBJECT: Refrigerator (Household Size)

TASK: Selects and correctly uses proper piece of equipment for a specified job

OBJECTIVES: Be able to (1) give procedure for proper care of the refrigerator
(2) recognize trouble signals in refrigerators

A refrigerator cools foods and keeps them cool. It helps to prevent spoilage of left-over food by removing the heat as soon as possible. It also serves to chill those foods which taste better when eaten cold. In addition to the house hold size refrigerators, food service establishments use both walk-in and reach-in refrigerators. Smaller refrigerators may be located away from the regular food service area. They are then used for convenience in serving desserts, salads, and butter to customers.

Suggestions for storage in the Refrigerator

Temperatures vary in different parts of the refrigerator. These variations are due to the circulation of air near the cooling coils. It is important, then, that refrigerators not be crowded. Containers should be placed so that circulation of air is not hampered.

Guidelines for Proper Storage in Different Areas of the Refrigerator

COLD	COLDER	COLDEST	FREEZING COMPARTMENT
Raw fruits Vegetables	Cooked meats Eggs Butter Cooked foods containing any of above ingredients	Milk Cream Raw meat, fish, poultry	All frozen foods, desserts to be frozen

Hints for Best Refrigeration of Foods

1. Containers should be dry and covered before they are placed in the refrigerator.
2. Doors should be opened only when necessary. Outside air carries moisture and will cause frost to form.
3. Hot food should be placed in refrigerator to speed cooling.
4. Do not obstruct mechanical units. Place food so that it does not crowd cooling unit. Keep rags, aprons, and trays off equipment enclosure.

Care of Refrigerator

DAILY:

1. Wipe spilled foods.
2. Wipe door gaskets.

NOTE: Do not use vinegar, salt, or caustic (any chemical that burns or eats away) in cleaning solutions. To prevent odors, rinse with baking soda solution.

AS NEEDED:

1. Wash shelves and walls, using warm water and detergent. Rinse with water to which a sanitizer has been added and wipe with a clean, dry cloth. Do not use ammonia or scouring pads.
2. Defrost when frost is 1/4 inch thick on coils or other parts of interior. If necessary, see manufacturer's directions for specific instructions.

Safety Precautions

Do not attempt to adjust, repair, or lubricate any electrical or mechanical parts of refrigerators. If these parts are not performing properly, notify your supervisor.

Trouble Signals to be Reported to Food Service Supervisor Include:

1. Excessive cooling indicated by frosting on coils
2. Unusual noises or vibrations
3. Failure to operate or maintain temperature

QUESTIONS:

Fill in the blanks:

1. When storing food in the refrigerator, it is important to place items so that air may ______________ freely around containers.

2. In order to prevent refrigerated food from drying out, all containers should be _________.

3. Opening the door of a refrigerator only when necessary helps prevent ________________ formation.

4. Raw meats, fish, and poultry should be stored in the _______ part of the refrigerator.

5. Frost should be removed when it has built to a _____ inch thickness.

6. Door gaskets should be wiped clean _____________.

7. A solution of ______________ may be used to help prevent odors in the refrigerator.

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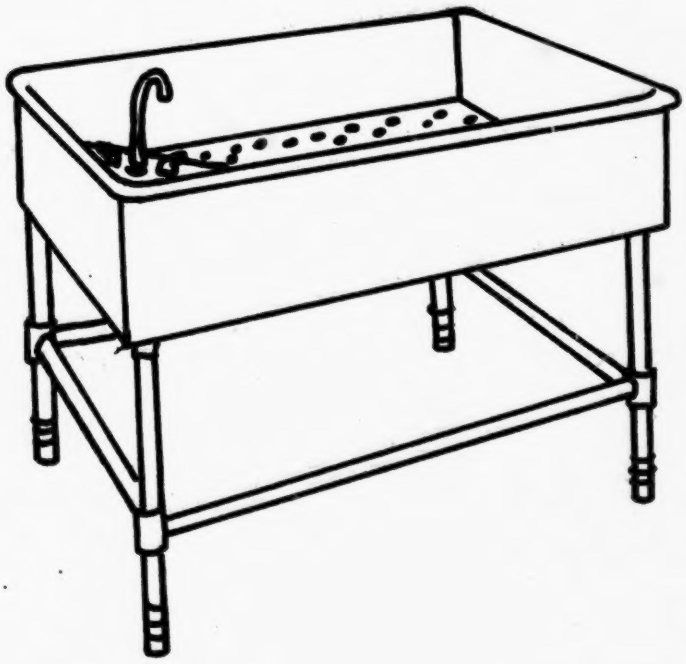
UNIT IV-8

COMMERCIAL KITCHEN EQUIPMENT

SUBJECT:	Bain-Marie
TASK:	Selects and correctly uses proper piece of equipment for a specified job
OBJECTIVE:	Be able to describe function and use of bain-marie

BAIN-MARIE

The primary purpose of the bain-marie is to keep food hot at the service counter. It is not to be used for cooking or for continuing the cooking process. Foods which may be kept hot in a bain-marie are sauces, gravies, soups, and vegetables. Food containers should be kept covered and they should be deep enough to keep the water level from rising and spilling into the food.



During operation, a pipe is inserted into the water drain which is located in the center of the bain-marie floor. The bain is filled with water at a level such that the food containers will be kept hot. Water must not cause containers to float, or spill into the food containers.

To insure correct temperature of the bain-marie, the water should be added and the controls should be turned on in advance of serving time. As the water is turned on, the steam switch is set at the "on" position. The steam switch to the hot wells should also be in the "on" position.

Extra precautions should be taken to prevent burns while placing or removing the food containers in the bain. Precautions should also be taken when removing the pipe from the water drain.

The steam switch should be turned to the "off" position when the bain-marie is not in use. The water is drained from the bain floor at the end of each serving period.

The metal bottom should be removed and cleaned thoroughly after use. If corrosion gathers on the bain, it should be removed with suitable chemicals.

QUESTIONS:

True or False:

_____1. The bain-marie is used to cook foods.

_____2. The water level should be lower than the food containers so that they do not float.

_____3. Steam switches should be turned to "on" while the water is on.

_____4. Water should be drained from the bain-marie at the end of each day.

_____5. Extra care must be taken to prevent burns when placing or removing the food containers in the bain.

UNIT IV-9

COMMERCIAL KITCHEN EQUIPMENT

SUBJECT: Cold Food Server

TASK: Selects and correctly uses proper piece of equipment for a specified job

OBJECTIVE: Be able to describe use and care of the cold food server

The cold food server is usually made of stainless steel and is sometimes called an ice bain-marie. It may be either stationary or portable. The purpose of this server is to keep cold food chilled. Before serving time the perforated inner liner is filled with crushed ice. The cold food is placed on this bed of crushed ice. As the ice melts the water drips into the lower container.

The cold food server must be cleaned completely each day. Water is removed by means of a drain in the bottom and is carried away through a drain pipe. The ice is removed and the entire cold food server is washed with a detergent solution and a clean cloth. The perforated metal liner is easily removed for complete cleaning. The food service establishment will have its own recommendation for a sanitizing product to use. The entire food server should then be completely rinsed and wiped dry. The cleaning of the cold food server may be the responsibility of the food service employee.

QUESTIONS:

Fill in the blanks:

1. The cold food server keeps food chilled by the use of ______________.
2. The cold food server is cleaned daily with a ______________ solution.

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UNIT IV-10

COMMERCIAL KITCHEN EQUIPMENT

SUBJECT: Steam Table

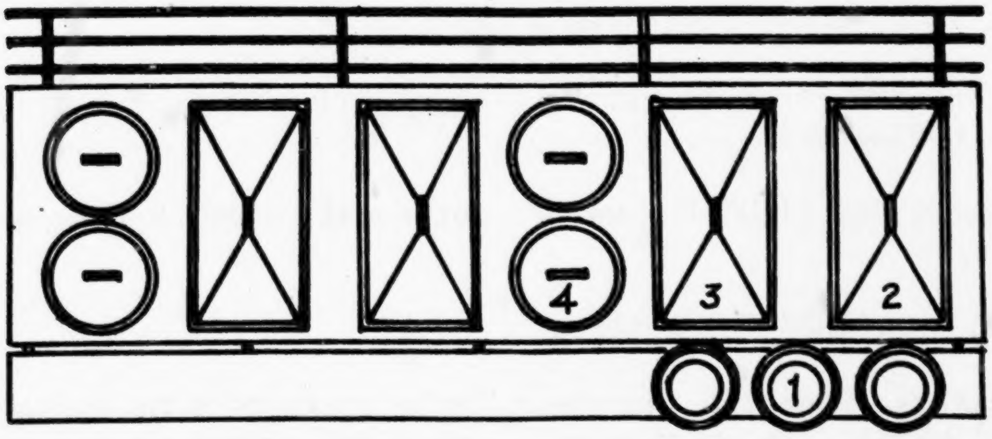
TASK: Selects and correctly uses proper piece of equipment for a specified job

OBJECTIVES: Be able to (1) outline steps used to set up and operate a steam table for food service
(2) list sanitation techniques to use in caring for the steam table

Setting up the Steam Table

Steam tables are used to keep foods hot and ready for immediate service. Food should be arranged on the steam table in the order in which it will be placed on the plate. (See illustration for proper arrangement.) This will aid in serving food rapidly.

STEAM TABLE



(1) Plates; (2) Meat; (3) Potatoes; (4) Vegetables

If the steam table is to be operated at maximum efficiency, certain principles should be remembered:

1. Water in the steam table tank should be kept at a degree of heat which will hold the food at a minimum temperature of 140° F. throughout. Under these conditions, the steam table acts as a control over germs. If the temperature drops too low, however, the steam table affords ideal conditions for germs to grow--moisture, warmth, and food.

2. Water should be held at the proper temperature because foods become over-cooked and dry if water boils or gives off excessive amounts of steam.

3. Containers should be covered when placed on the steam table and remain covered until time to serve.

4. The water pan should be filled with hot tap water to save time and fuel.

Cleaning and Sanitation of Steam Tables

Effective cleaning removes soil from equipment. It is important not only to be aware of proper cleaning procedures, but also to know the "when" of cleaning. In applying the principles of sanitation, the time factor cannot be overemphasized. Cleaning immediately after use reduces the length of time during which bacterial growth may occur, and it also requires less time and energy. It should be kept in mind, therefore, that if the steam table is to be cared for properly, food particles should be removed promptly after service is completed. Another pointer to remember is that the higher the kitchen temperature, the shorter the intervals should be between cleanings.

Basic Steps in Cleaning Steam Table Containers

1. Scrape and pre-rinse to remove excess soil. Be sure to clean covers as well as containers.

2. Wash, using hot (120° F.) water, detergent, stiff brush, and "elbow grease."

3. Rinse in hot (140° F.) water.

4. If necessary, sanitize the steam table containers by using hot (170° - 180° F.) water. In an emergency, chemical agents may be used in place of hot water.

5. Air dry steam table containers. This is the most effective method because of probable bacteria on drying towels.

6. Drain and clean water pan often to prevent formation of slime.

QUESTIONS:

Multiple choice:

1. Food should be arranged on the steam table according to the
   a. color combinations.
   b. order in which it will be placed on plate.
   c. order in which it will be eaten.

2. Water in the steam table should be kept at
   a. 140° F.
   b. boiling point.
   c. a temperature to hold food at 140° F.

3. In order to prevent bacterial growth, the steam table should be cleaned
   a. immediately after service is completed.
   b. after it has cooled.
   c. the same day it is used.

4. A steam table may be sanitized by using water at
   a. 120° F.
   b. 170° - 180° F.
   c. 140° F.

UNIT IV-11

COMMERCIAL KITCHEN EQUIPMENT

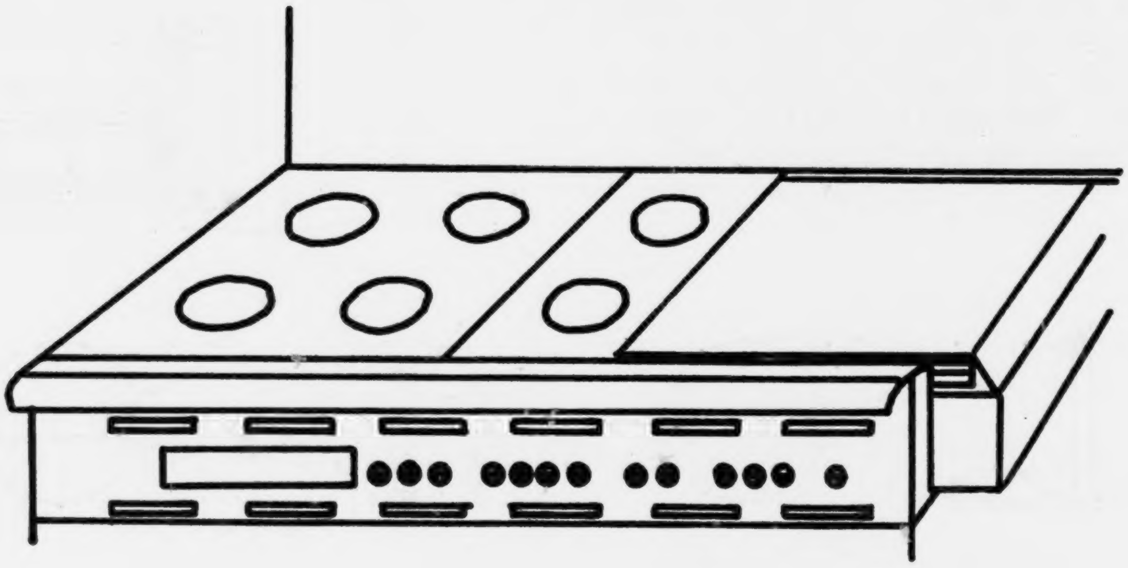
SUBJECT: Electric and Gas Ranges, Hot Tops, Broilers, Stack Ovens, and Compartment Steamers

TASKS: Lights and adjusts gas burners, turns on electrical appliances, and turns on valves to steam equipment

Selects and correctly uses proper piece of equipment for a specified job

OBJECTIVE: Be able to describe functions of and procedures for using ranges, stack ovens, hot tops, broilers, and compartment steamers

ELECTRIC RANGE TOP



The possible settings for an electric range top are high, medium, or low. Use high only until the food starts to cook, then turn to medium or low. "Low" produces 1/4 and "medium" 1/2 as much heat as "high." If the electric range has a thermostatic control, turn the switch to the exact setting for the temperature desired.

When turning on the heat controls, adjust only those for the portion of the range top to be used. Arrange pots on a solid top so that they cover as much of the heated surface as possible. Pots on round units should cover the entire unit to make the best use of heat and to insure that the food will cook evenly. This will not only save electricity, but it will help keep the kitchen cooler. Be sure to turn the units off when the food to be cooked is removed from the range top.

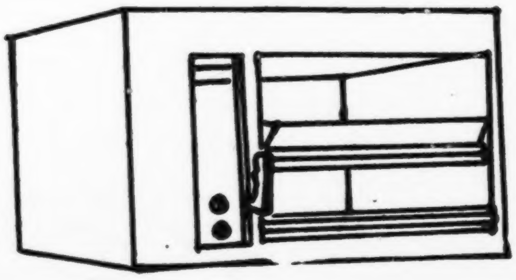
Cover pots and pans when steaming foods. This prevents burning and reduces cooking time. Wipe up immediately any food that has boiled over or spilled. Keep grease cleaned out of cracks or drip trays because it may become a fire hazard.

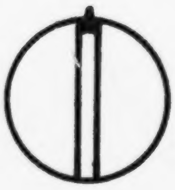
Clean solid top or round units daily using a wire brush or scraper. Wipe with a solution of hot water and detergent. Cleaning powder may be used to remove rust or spilled food. Remove and scrub drip trays with hot detergent solution. Clean sides and base with hot water and detergent solution.

Let range cool before cleaning. Do not pour water on top to cool or to wash. Do not allow water to come in direct contact with wiring or electric switch.

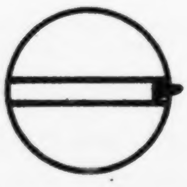
BROILER

Two electric coils are inside the top of the broiler oven, one in the front and one in the back. The racks may be adjusted by raising or lowering the lever. The temperature is adjusted by using knobs, which are pulled out and then locked into position. The positions for high, medium, and low are shown below:

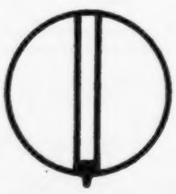




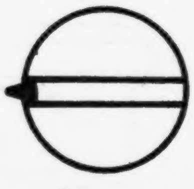
OFF



HIGH



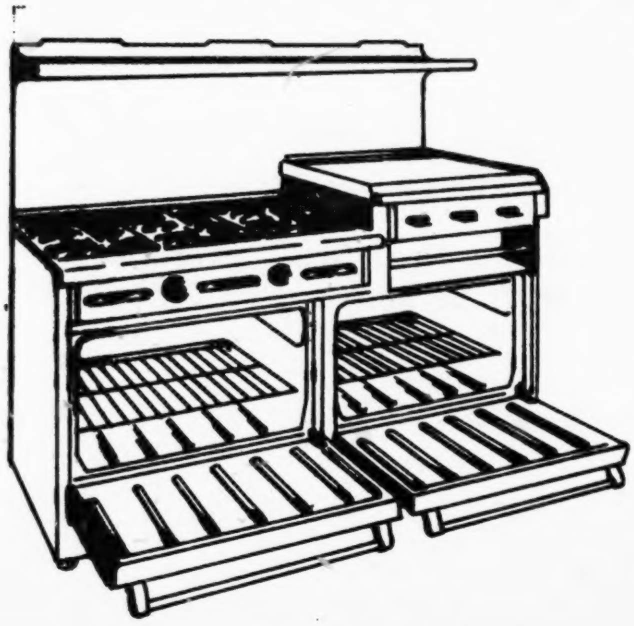
MEDIUM



LOW

Use caution when handling hot pans, especially if they contain hot grease. Sheet pans should be handled with special caution.

GAS RANGE



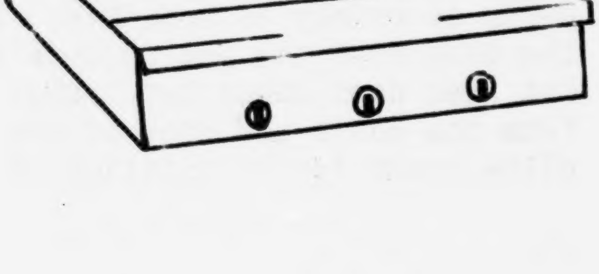
On gas ranges which are equipped with a valve, the burner valve should be turned on gently. On ranges without pilots, the match is lighted before turning on the burner valve. Use a low flame for simmering and a high flame for boiling. After the boiling point is reached, turn flame down to save fuel. If open burners are used, pots should cover entire unit to make best use of fuel and to cook evenly. When using solid top burners, arrange pots to cover as much of heated surface as possible.

Wipe up any food that is spilled or boiled over. The range top should be cleaned daily using a brush or scraper. Always let range cool before cleaning Wipe with a hot detergent solution, rinse, and dry. Drip trays should be removed and scrubbed with detergent solution, rinsed, and dried. The sides of the stove should be cleaned with the same solution.

Weekly care includes soaking burners in hot detergent solution. Clogged burners should be cleaned with a stiff wire or an ice pick, rinsed, and dried.

Unpainted parts of the range can be made rust proof by wiping them with a cloth dampened with cooking oil or other rust preventives. This is unnecessary for stainless steel surfaces.

HOT TOP

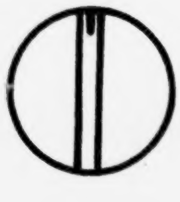


The hot top is used for any cooking that is to be done on top of the stove. It is not practical for heating large containers because it takes too long. Nor is it practical for heating milk, because the milk will usually scorch. Any spilled or burned food should be scraped off immediately.

Each burner has a control knob which is located at the front. There is also a pilot light for each burner.

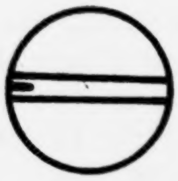
The burner is off when the pointer of the knob is in the 12:00 o'clock position:

OFF



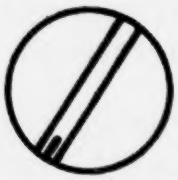
The knob is turned counterclockwise until it reaches the 9:00 o'clock position for a high flame:

HIGH



For a low flame, the pointer is turned down to about a 7:00 o'clock position:

LOW

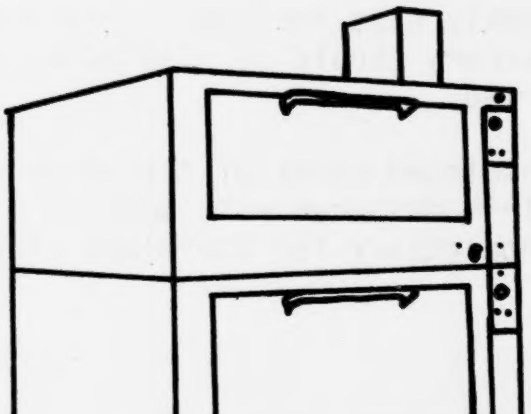


STACK OVEN

The stack oven is used for roasting, baking, and oven frying, and it may be operated by either gas or electricity.

Electric Deck Oven

The first step in heating an electric deck oven is to turn the directional heat control switch to "medium" or "high" as needed. After turning the switch on, the thermostat should be set at the desired temperature. The oven should then be allowed to preheat before food is placed in it. Remember that the oven will not preheat any faster when it is set at a higher temperature.



When the proper temperature is reached, place the food in the oven. Load the decks as evenly as possible. Place the pans over the entire deck area, but keep pans about two inches away from the walls and door of the oven to allow space for circulation of heat.

Do not rest heavy pans on the door as this may cause the door to spring and prevent it from closing tightly.

The vent control should be kept closed completely to prevent heat from escaping. Excessive opening of the door should also be avoided to prevent loss of heat and to produce a better product.

Gas Deck Oven

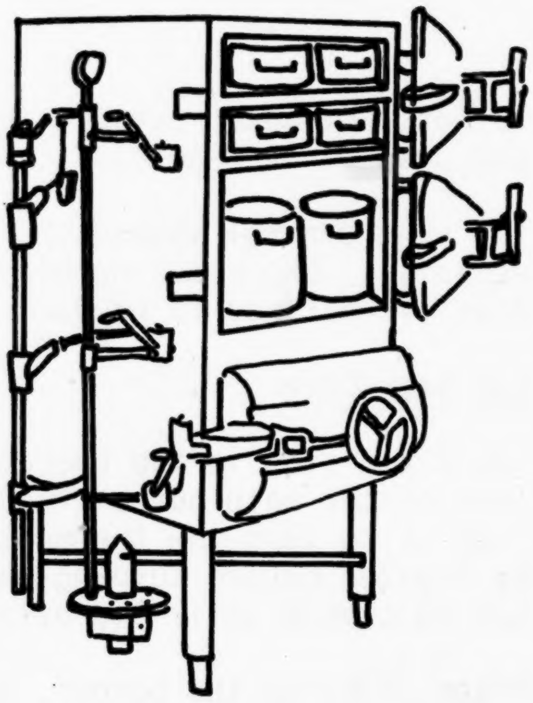
The first step in the operation of a gas deck oven with a pilot light is to turn on the main burner valve. If the oven does not have a pilot, the first step is to turn the thermostat as high as possible. Then the match should be lighted before turning on the main burner valve. The oven door should not be closed until the oven is lighted.

After lighting the burner, the thermostat is set at the desired temperature. Just as with the electric oven, setting the thermostat at a high temperature will not decrease the length of time necessary for preheating. When the proper oven temperature is reached, the food may be placed in the oven.

To increase the temperature on either the gas or electric oven, reset the thermostat dial and wait until the "oven ready" light goes out before loading. To lower the oven temperature, turn the thermostat about 25° F. below actual temperature required and open the oven door until the "oven ready" light goes on. Close the door and wait for the "oven ready" light to go out again before loading the oven.

Clean deck ovens daily by scraping with an oven scraper to remove deposits. Clean the interior oven walls with a damp cloth or wire brush. At intervals, clean crumbs from the return air passage. A solution of one-half household ammonia and one-half water may be used for cleaning the exterior surfaces.

COMPARTMENT STEAMER



The compartment steamer is used for steaming fruits, vegetables, meat, fish, and poultry. Tall, narrow, perforated baskets should be used when preparing cabbage, cauliflower, root, and tuberous vegetables. Flat, narrow, or wide perforated baskets are used for greens, root, and tuberous vegetables. Tall, narrow solid baskets are used for large cuts of meat, fowl, and root vegetables.

Before turning on the steamer, the door should be closed and locked. Then for electric or direct steamer connections, the controls or switch may be turned on and the steam valve for each compartment pulled to admit steam and force the air out through the vent. The manufacturers' instructions should be followed for gas connections. The steamer should be preheated just long enough to bring the pressure up. While waiting for the pressure to build up, put food in baskets or pans. Do not fill the baskets to the top, but allow room for expansion of the food.

Push valve to release steam; open the door after the steam is released. Place the baskets or pans in the steamer. Close the door and pull the steam valve. Start timing when the desired pressure is reached.

The length of the cooking time will depend on the type of steamer, the kind and amount of food cooked, and the containers used. It is recommended that a timer be used to prevent overcooking.

At the end of the cooking time, push the valve to release the steam. Turn off controls or switch and allow pressure to return to zero. Open the door gently to prevent splashing of hot foods. Remove the food.

Wash interior and exterior with a brush dipped in water and mild detergent. Rinse with clear water and dry. Leave door slightly open when not in use to prevent gasket from sticking to compartment.

QUESTIONS:

1. Draw the positions for the setting of a broiler on "high," "medium," "low," and "off."

2. When should the "high" setting on electric ranges be used?

3. On gas ranges without pilots, when should the match be lighted?

4. Draw the positions of the burner knobs for "off," "high" and "low" for a gas hot top.

5. Briefly list the three steps in heating an electric deck oven.

6. Why should one avoid excessive opening of an oven door during baking?

7. List the five steps in heating a gas deck oven without a pilot.

8. Jane forgot to turn on the oven at the time the head cook told her. When she remembered to do it, she asked Betty if it would preheat faster if she set the thermostat on high. What should Betty have told her?

9. What should be done before turning on a compartment steamer?

10. This is the procedure Betty followed when she used the compartment steamer:
    1. Pushed valve to release steam.
    2. Opened the door immediately.
    3. Placed food in steamer.
    4. Closed the door.
    5. Started timing.

    Did she use the correct procedure? If not, what should she have done?

UNIT IV-12

COMMERCIAL KITCHEN EQUIPMENT

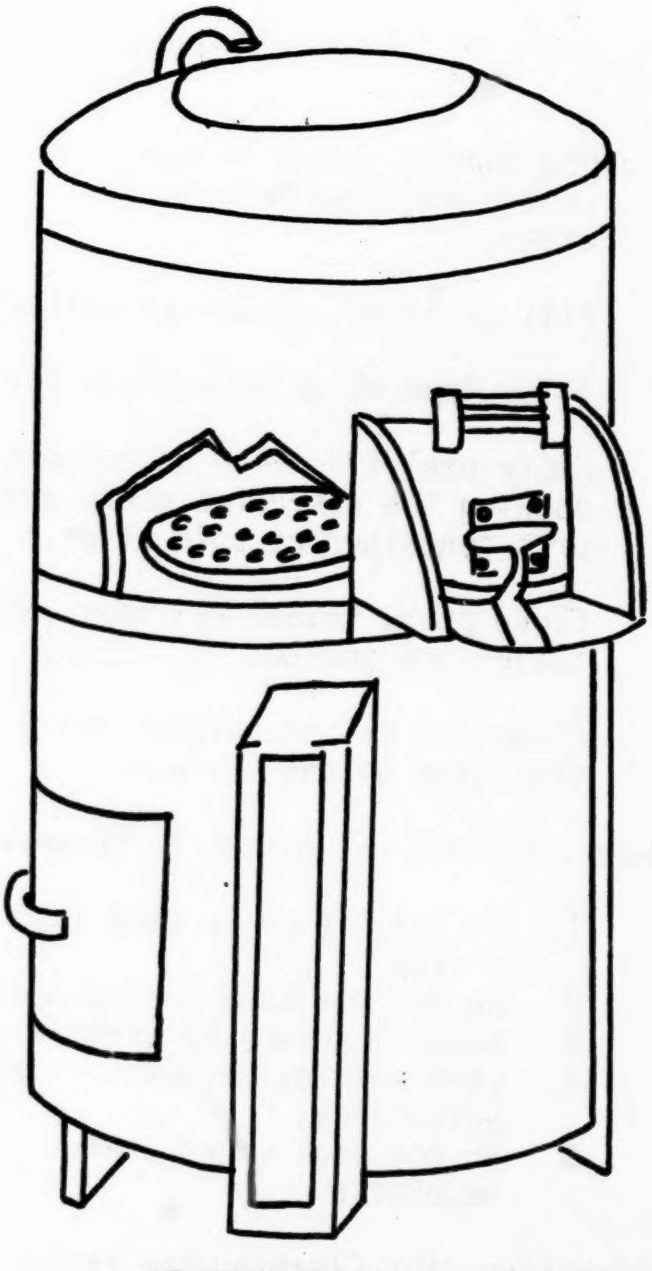
SUBJECT: Vegetable Peeler

TASK: Selects and correctly uses proper piece of equipment for a specified job

OBJECTIVE: Be able to describe use and care of the vegetable peeler

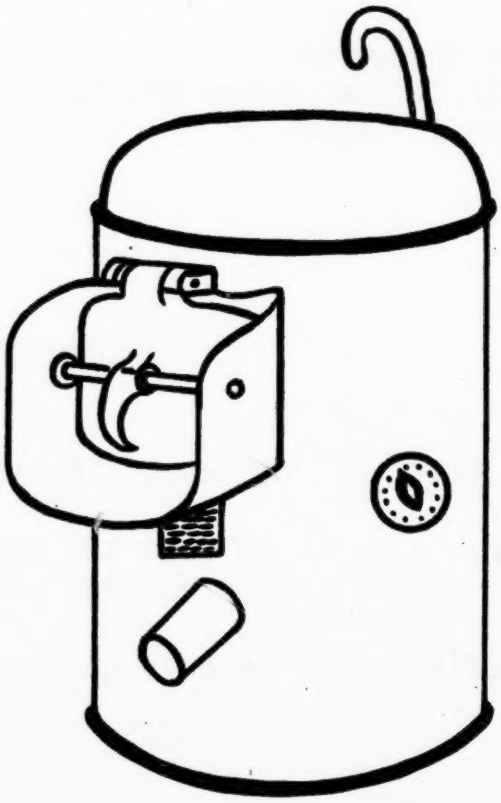
A mechanical vegetable peeler is used in quantity food preparation to peel such vegetables as white potatoes, sweet potatoes, carrots, and parsnips. It is used also to size potatoes.

The permanently installed vegetable peeler may look like the one shown. It is attached to the floor and is usually located next to the vegetable sink. Drainage should be adequate to handle the vegetable peelings.



VEGETABLE PEELER

The portable potato peeler as illustrated is inexpensive and satisfactory for a small school or business. It may be used anywhere water and an electrical outlet are available.



PORTABLE POTATO PEELER

Some general instructions for the operation and care of a vegetable peeler are:

Sort and separate the vegetables according to use.

Place abrasive disk firmly in place and insert strainer basket into peel trap.

Check to be sure discharge door is closed.

Use control motor to start switch and then turn on the water.

Fill cylinders about 2/3 full with vegetables. Do not overload.

Allow from 45 to 90 seconds for peeling time.

Empty peel trap when it becomes 2/3 full by shutting off the water valve, opening the discharge door, and letting vegetables tumble into the sink or a container of cold water.

Close door, reload cylinder, and continue the operation until all vegetables are peeled.

Clean the cylinder immediately after use so no peeling particles dry and stick to the surface.

Some cautions and guides to observe when using a potato peeler are:

1. Do not let water come into contact with the motor or electrical wiring.
2. Do not put hand inside peeler while peeler is in operation.
3. Never load peeler without turning on motor and water.
4. Load machine at exact capacity--underloading or overloading reduces efficiency.
5. Do not peel excessively. This results in waste and bruising of vegetables.

Directions for Cleaning the Peeler

The first step in cleaning the peeler is to remove the cover and peeling disc. Then the interior should be cleaned with hot water and scrubbed with a stiff brush. Leave the discharge door open so the interior will dry.

The next step is to clean the peel trap by removing the peel trap cover, strainer basket, and stopper and flushing the interior with hot water. Leave open to dry. Then clean the parts--cover, peeling disc, peel trap cover, strainer basket, and stopper--with a stiff brush and hot water.

The final step is to wipe the exterior with a damp cloth.

QUESTIONS:

Fill in the blanks:

1. Vegetable peelers may be portable or ________________.
2. A portable peeler requires ____________ and an electrical outlet for operation.
3. Vegetable peelers may be used to peel white potatoes, __________, and ______________.
4. Before operating a vegetable peeler, check to see that the _________ disc is in place.
5. Fill the peeler about ___________ full of vegetables for most efficient operation.
6. The time required for peeling will be ________________.
7. It is important to load the vegetable peeler at exact capacity because ____________________.

Home Economics
Instructional Materials Center
Lubbock, Texas

UNIT IV-13

COMMERCIAL KITCHEN EQUIPMENT

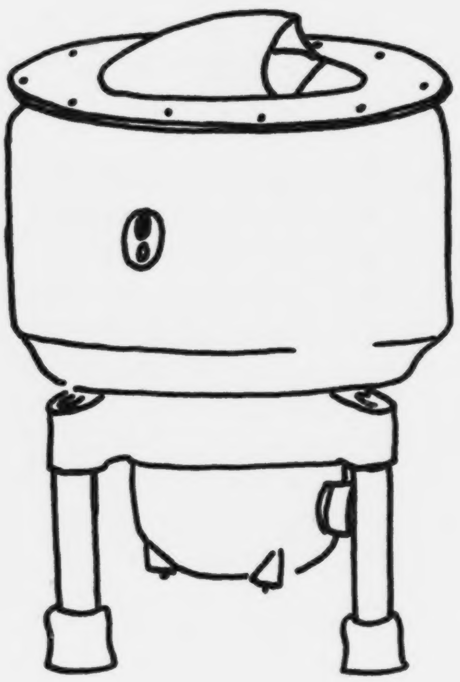
SUBJECT: Garbage Disposal

TASK: Selects and correctly uses proper piece of equipment for a specified job

OBJECTIVE: Be able to describe use of a garbage disposal

GARBAGE DISPOSAL

The sanitary disposal of waste is of great importance to the operation of a food service institution. One of the best ways of doing this is to use a garbage disposal because it grinds garbage to a pulp and carries it into the sewer line.



To operate the garbage disposal, press the "on" switch. This turns on the water and starts the action of the knife blades which do the grinding. Feed garbage into the disposal gradually, being careful not to overload the machine. Check to see that there are no large bones, corn cobs, cabbage cores, or other items which would damage the knives in the disposal. Keep fingers and hands away from knife blades.

When the grinding action is completed, allow the machine to run at least five minutes longer to make sure that all garbage has been washed away from the knife blades.

To clean, turn switch to "off" position. Remove cover, wash inside and outside with water and a mild detergent. Rinse with clear water and dry.

When a garbage disposal is not available, garbage should be kept covered in sterilized garbage cans. Refrigeration will delay decomposition and prevent odor. All waste should be removed from the premises daily.

QUESTIONS:

Multiple Choice:

_____ 1. The most adequate means of waste removal from a food service institution is by
  a. selling it to local farmers.
  b. a garbage disposal unit.
  c. an incinerator.

_____ 2. When the garbage disposal is turned "on," water flows into it and grinding blades are
  a. activated.
  b. stationary.
  c. suspended.

_____ 3. The garbage should be fed into the machine
  a. all at once.
  b. rapidly.
  c. gradually.

_____ 4. To be certain all garbage is washed away from the blades, the machine should run for five minutes after
  a. the water is turned off.
  b. the grinding has stopped.
  c. the blades have stopped.

_____ 5. To prevent odor from garbage when a disposal is not available, the covered garbage cans may be stored
  a. in the walk-in refrigerator.
  b. outside the back door.
  c. in a closet.

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Lubbock, Texas

UNIT IV-14

COMMERCIAL KITCHEN EQUIPMENT

SUBJECT: Knives

TASKS: Selects proper hand utensils for particular food preparation tasks

Follows appropriate procedures when using cutlery

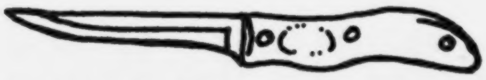
OBJECTIVE: Be able to identify and select correct knife for a specific task

SUPPLEMENTARY REFERENCE: Tigner, Nancy C. and Knickerehn, Marie E. A French Knife. Ithaca, New York: Cornell University. 1963.

Selecting the right knife for a particular task can be a puzzling experience in most food service kitchens. The different kinds of knives have been made for specific uses. Selection of the right knife can make the job to be done easier and can help to insure that the task will be done correctly.

Illustrations and purposes of some of the most commonly used knives follow:

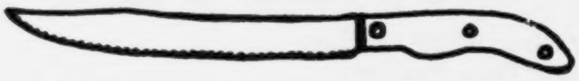
BONING KNIFE



5" to 6" blade made of stainless or carbon steel--wooden or plastic handle

disjointing fowl
separating meat from bone
dicing raw meats
coring lettuce

BREAD KNIFE



9" blade with serrated edge

slicing bread or cake

HINT FOR USING: Hold bread or cake lightly and use a sawing motion with the knife.

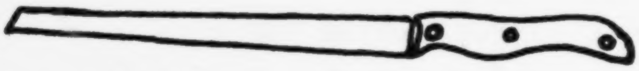
FRENCH KNIFE

8" to 12" blade of crucible or
stainless steel--wooden handle

slicing and cutting raw fruits and vegetables
slicing hot or warm meat
chopping small quantities of materials, such as parsley, onions, and nuts
dicing and mincing ingredients

HINT FOR USING: Hold point of knife on cutting board with one hand. Use other hand to lift handle of knife in an up-and-down slicing motion.

SLICER

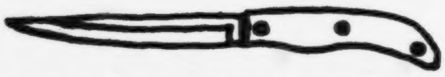


10" to 16" carbon or stainless
steel blade which may be serrated--
wooden or plastic handle

slicing tomatoes
slicing lettuce wedges
slicing roast or ham
cutting cakes or sandwiches

HINT FOR USING: When slicing meat, use back-and-forth sawing motion.

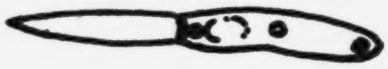
FRUIT AND SALAD KNIFE



5-1/2" to 6" stainless steel blade

coring lettuce
paring and sectioning fruits

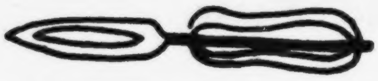
PARING KNIFE



3" to 3-1/2" blade of carbon or
stainless steel

paring fruits and vegetables
removing eyes from potatoes

PEELER



6" floating blade

slicing thin strips of fruits and vegetables
peeling fruits
peeling vegetables

Knives which are kept sharp are both easier and safer to use. Less pressure is required when the knife is sharp and there is less danger that the knife will slip.

Practices to follow which will help to keep knives sharp are:

1. Wash knives by themselves, rather than with other utensils.
2. Place knives in the dishwashing sink with the handles together and the blades pointed in the same direction.
3. Dry each knife separately and store in knife rack or specified place in the drawer.
4. Use only for cutting and slicing, not for prying lids or cans open.

SAFETY PRACTICES IN USING CUTLERY

Proper use and care of knives is an important factor in keeping knives in good condition. Following are some guidelines[1] for using knives:

1. Use the correct knife for a particular job.
2. Use a cutting board whenever possible.
3. Always wash and wipe a knife from the back of the blade, being sure that the fingers do not extend to the cutting edge.
4. Do not put a knife down into water where it is not easily seen.
5. When carrying a knife, hold it with the point downward.
6. Do not use a knife as a lever to pry jar lids off or for other similar purposes.
7. Do not use a knife for cutting paper and string or for sharpening pencils.
8. A sharp knife is safer than a dull knife if it is used effectively and thoughtfully.
9. Knives stored in racks or in slots in drawers can be picked up with more safety than those which are thrown into a drawer.
10. Do not use a knife to turn food, such as hamburger patties, steaks, pork chops, or pancakes, since heat will damage the blade.

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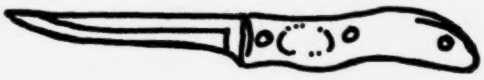
[1] U.S. Department of Agriculture, Training Course Outline on Use and Care of Equipment. Washington, D.C.: U.S. Government Printing Office. 1960, pp. 132.

QUESTIONS:

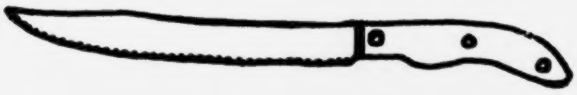
1. Identify the knives in the illustrations on the right.

KNIVES

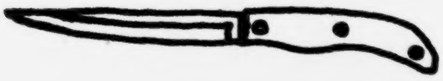
a. ______________________ a.



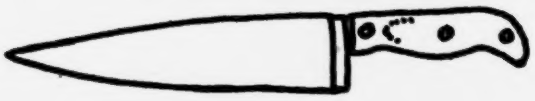
b. ______________________ b.



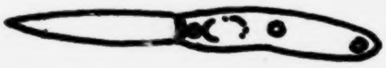
c. ______________________ c.



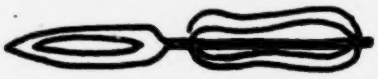
d. ______________________ d.



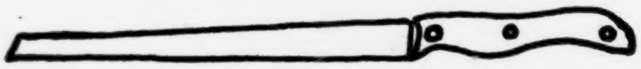
e. ______________________ e.



f. ______________________ f.



g. ______________________ g.



2. Write the letter of the knife illustrated in question 1 that you would use for each of the tasks listed below.

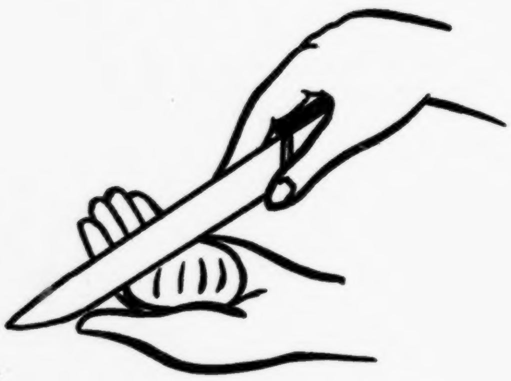
FOOD PREPARATION TASKS

____ 1. cutting cakes
____ 2. peeling carrots
____ 3. coring lettuce
____ 4. chopping parsley
____ 5. slicing bread
____ 6. paring and sectioning fruits
____ 7. removing meat the bones
____ 8. cutting sandwiches
____ 9. slicing raw fruits
____ 10. paring fruits and vegetables
____ 11. slicing tomatoes
____ 12. dicing raw meat

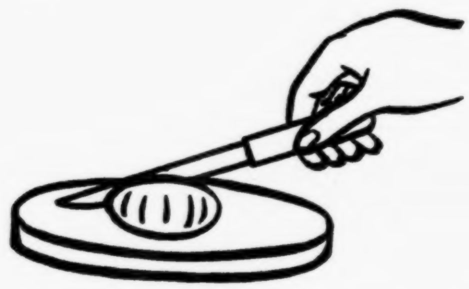
Select the correct practice in each of the following examples:

3. Chopping

a.

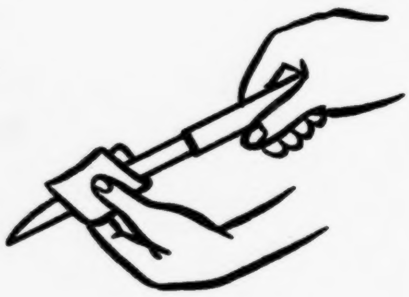


b.

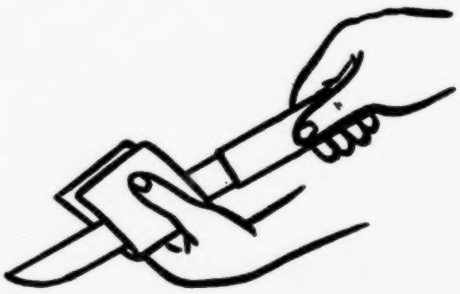


4. Washing or Wiping a Knife

a.

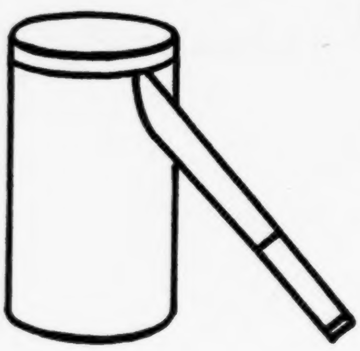


b.

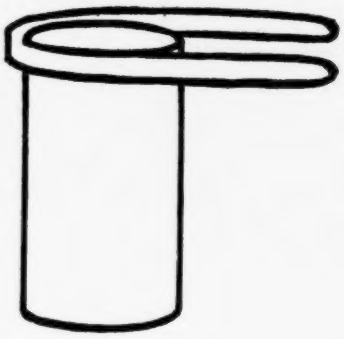


5. Opening a Jar

a.

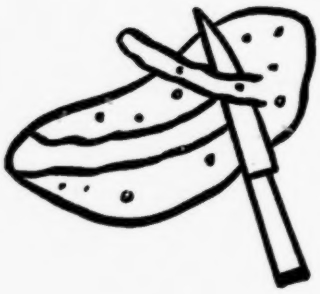


b.

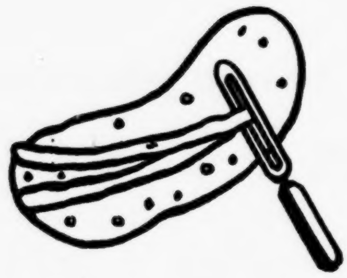


6. Paring a Potato

a.

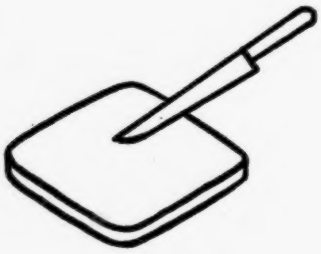


b.

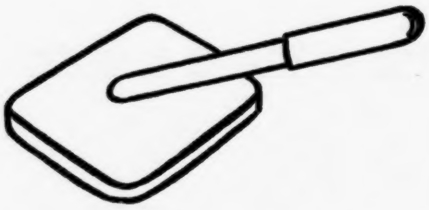


7. Spreading Sandwiches

a.

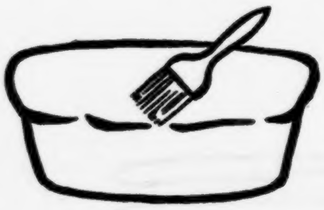


b.

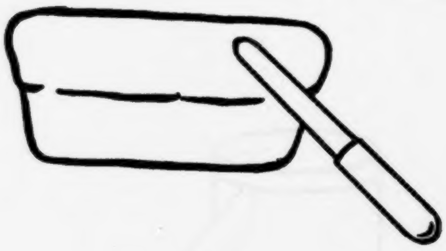


8. Spreading Melted Butter

a.



b.



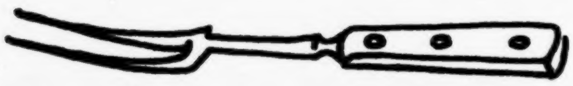
UNIT IV-15

COMMERCIAL KITCHEN EQUIPMENT

SUBJECT:	Hand Utensils
TASK:	Selects proper hand utensils for particular food preparation tasks
OBJECTIVE:	Be able to identify and select correct hand utensil for a specific task

Can you identify all the hand utensils in the food service business where you are employed? Do you know which utensil will do the best job for the tasks you are assigned? Below are some clues as to identification and use of the hand utensils you may find in your work area.

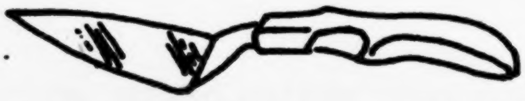
COOK'S OR UTILITY FORK



8" to 14" in length--steel tines riveted to wooden handle

turning and handling roasts
holding meats while slicing

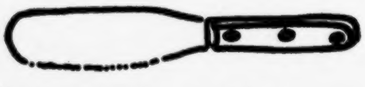
PIE KNIFE OR SERVER



6" length--flat area 4"X 2"

removing pieces of pie from pan

SANDWICH SPREADER



3-1/2" blade, which may be serrated

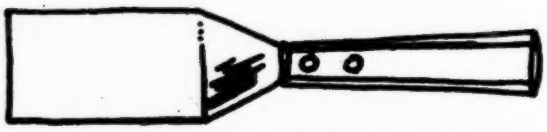
spreading fillings on sandwiches

SPATULA

Varies from 8" to 12" in length--
has medium flexibility

leveling ingredients in
measuring spoons or cups
spreading large areas of foods

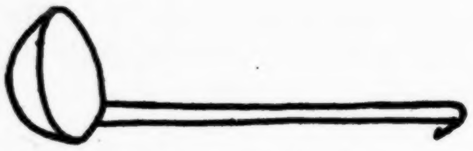
HAMBURGER TURNER



6" blade of stainless steel

turning hamburgers or other
meat patties

LADLES



Varies in size from 1 to 30 oz.

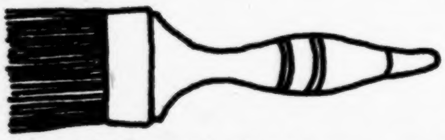
portioning liquids such as
gravies, salad dressings,
soups, and sauces

PIERCED SPOON

11" to 15" in length--stainless
steel

serving foods which need to
be drained

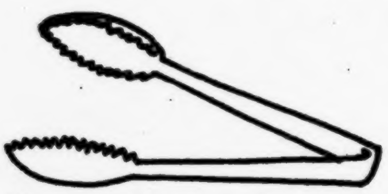
PASTRY BRUSH



Sterilized bristles held in
place by rubber strip

spreading melted butter or
sauce on some food product

POM TONGS



9" to 12" in length

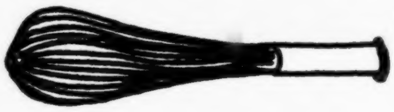
handling food products such
as ice cubes and rolls,
without touching with hands

SCRAPER

9-1/2" or 13-1/2" in length--molded rubber attached to wooden handle

folding and blending ingredients
scrapping dishes, bowls, and plates

WIRE WHIP



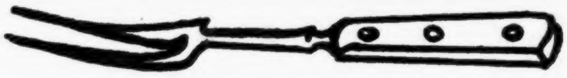
10", 12", or 16" in length--stainless steel or chrome

stirring or whipping ingredients
incorporating air into ingredients (more effective than rotary beater or mixer)

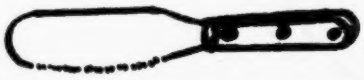
QUESTIONS:

1. Identify the following pieces of equipment:

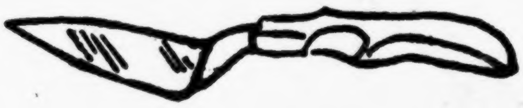
a. ______________ a.



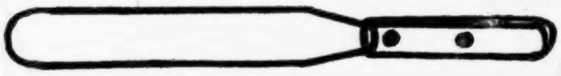
b. ______________ b.



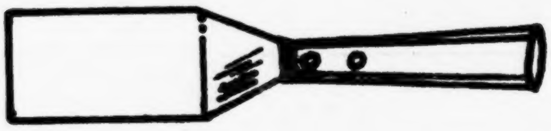
c. ______________ c.



d. ______________ d.



e. ______________ e.



2. Match the piece of equipment with the task.

_____1. spreading sandwiches

_____2. turning steaks or hamburgers

_____3. cutting meat loaf

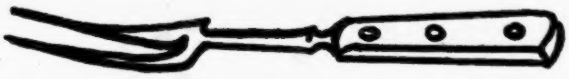
_____4. loosening food from pans

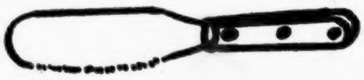
_____5. holding meat while slicing

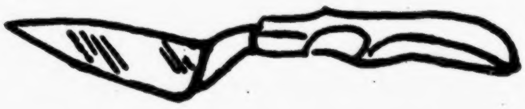
_____6. serving pie

_____7. turning a roast

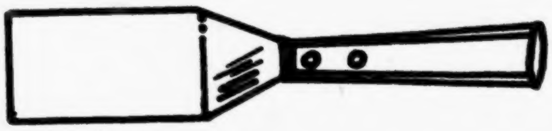
_____8. frosting cakes

a. 

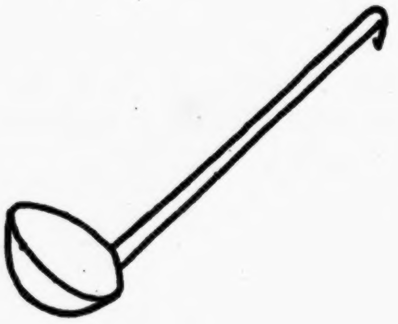
b. 

c. 

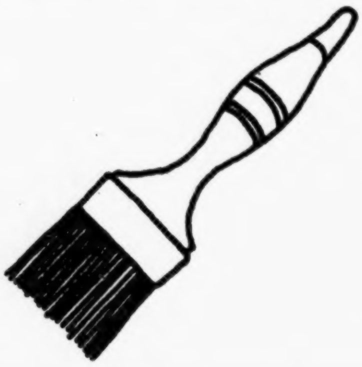
d.

e. 

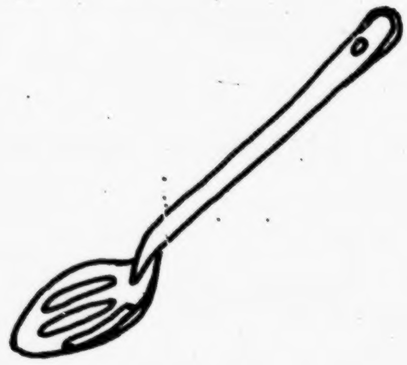
3. Identify these pieces of equipment and give their main use.



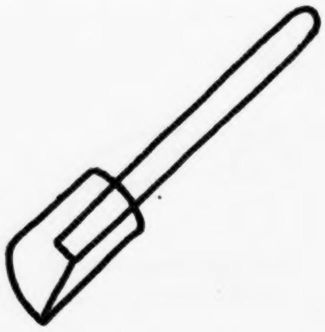
a. ____________________



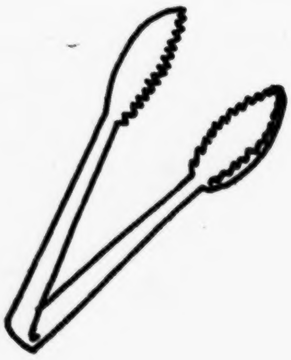
b. ____________________



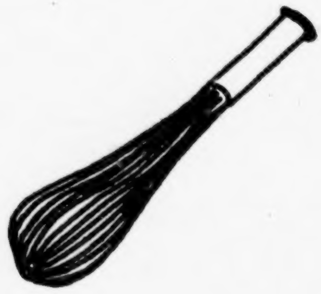
c. ____________________



d. ____________________



e. ____________________



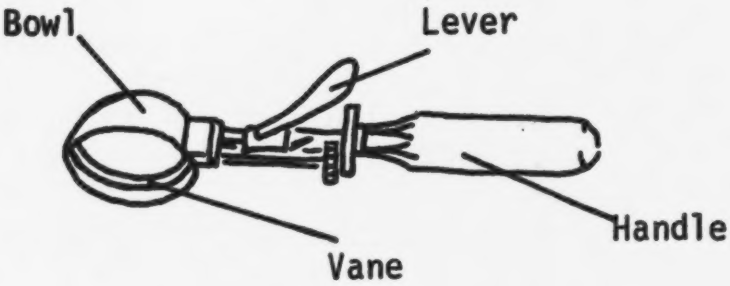
f. ____________________

UNIT IV-16

COMMERCIAL KITCHEN EQUIPMENT

SUBJECT:	Dippers
TASK:	Selects proper hand utensils for particular food preparation tasks
OBJECTIVES:	Be able to (1) identify parts of the dipper (2) list procedures for care of the dipper (3) list uses for various sizes of dippers

DIPPER



Uses

The main function of the dipper is to portion food and thereby control the amount of food served. It is used also for shaping some foods.

Operation

When using the dipper, grasp the handle in the palm of the hand. Place the bowl of the dipper into the food and fill by pushing dipper against the side of container which holds the food. This insures level measurement. Do not round off or heap the dipper. Press lever on the dipper with the thumb to release food onto the plate. The vane rotates around the bowl of the dipper to aid in releasing the food.

Special Care

To clean the dipper, wash in warm detergent water. Use clear water with disinfectant added for rinsing. Drain and air-dry.

The chart below shows the uses of the various sizes of dippers and the number and sizes of portions per quart of food.

DIPPER SIZES	NUMBER OF PORTIONS PER QUART	SIZE OF PORTIONS (in oz., T., or c.)	DIPPER USES
#6	6	6 oz. or 10 T	luncheon type salads
#8	8	4 to 5 oz. or 1/2 c.	luncheon foods, meats with sauces
#10	10	3 to 4 oz. or 6 T.	pudding type desserts, ground meat for patties, some vegetables, hot cereals, meat balls
#12	12	2-1/3 to 3 oz. or 1/3 c.	meat salads, vegetables, muffin batter, some desserts
#16	16	2 to 2-1/4 oz. or 1/4 c.	muffin batter, some types of desserts
#20	20	1-3/4 to 2 oz. or 3 T.	muffin batter, cup cakes, various sauces, and gravy
#24	24	1-1/2 to 1-3/4 oz. or 2-2/3 T.	cream puffs and cookies
#30	30	1 to 1-1/2 oz. or 2 T.	drop-type cookies

QUESTIONS:

Study the diagram of the parts of the dipper. Match the letter of the dipper parts with the statements in items 1 through 4.

1. The dipper is held by the _____.
2. The food is measured in the _____.
3. The _____ rotates when the
4. _____ is pressed, releasing the food.

DIPPER PARTS

a. Vane
b. Lever
c. Handle
d. Bowl

5. Change the following portion servings from ounces to tablespoons or parts of a cup:

OUNCES	TABLESPOONS OR PARTS OF CUP
a. 6 oz.	a.
b. 4 to 5 oz.	b.
c. 3 to 4 oz.	c.
d. 2-1/3 to 3 oz.	d.
e. 2 to 2-1/4 oz.	e.
f. 1-3/4 to 2 oz.	f.
g. 1-1/2 to 1-3/4 oz.	g.
h. 1 to 1-1/2 oz.	h.

The number of ounces per serving determines the number of servings per quart. Using the table in the reading materials, match the number of ounces per serving with the resulting number of servings per quart in items 6 through 13.

OUNCES PER SERVING	SERVINGS PER QUART
6. 1 to 1-1/2 oz.	a. 8 servings per quart
7. 1-1/2 to 1-3/4 oz.	b. 16 servings per quart
8. 1-3/4 to 2 oz.	c. 20 servings per quart
9. 2 to 2-1/4 oz.	d. 6 servings per quart
10. 2-1/3 to 3 oz.	e. 12 servings per quart
11. 3 to 4 oz.	f. 24 servings per quart
12. 4 to 5 oz.	g. 10 servings per quart
13. 6 oz.	h. 30 servings per quart

14. What is the relationship between the number of servings per quart and the number of the dipper size?

15. Give the number and size of servings per quart that the following sizes of dippers will serve.

DIPPER SIZE	NUMBER SERVINGS PER QUART	SIZE IN OUNCES
a. #12	______________	______________
b. #16	______________	______________
c. # 6	______________	______________
d. #10	______________	______________
e. # 8	______________	______________
f. #24	______________	______________
g. #20	______________	______________
h. #30	______________	______________

In items 16 through 23, match the size of the dipper with the appropriate foods and serving size:

FOODS AND SERVING SIZE

16. Muffin batter, desserts
2 to 2-1/4 oz. or 1/4 c. portions
17. Pudding type desserts, meat patties, meatballs, vegetables, hot cereals
3 to 4 oz. or 6 T. portions
18. Luncheon type salads
6 oz. or 10 T. portions
19. Muffin batter, cup cakes, sauces, and gravy
1-3/4 to 2 oz. or 3 T. portions
20. Luncheon foods, meats with sauces
4 to 5 oz. or 1/2 c. portions
21. Cream puffs and cookies
1-1/2 to 1-3/4 oz. or 2-2/3 T. portions
22. Meat salads, vegetables, muffin batter, desserts, salads
2-1/3 to 3 oz. or 1/3 c. portions
23. Drop-type cookies
1 to 1-1/2 oz. or 2 T. portions

DIPPER SIZE

a. # 6
b. # 8
c. #10
d. #12
e. #16
f. #20
g. #24
h. #30

24. Suzie had been using the number 10 dipper to portion the chocolate pudding for the evening meal. The steps she should use to clean the dipper are:
a.
b.
c.
d.

ASSIGNMENT FOR UNIT IV:

List at least three of the pieces of equipment described in this entire unit on "Commercial Kitchen Equipment" (IV-1 through IV-16) which you often use at your training station. What procedures do you follow in the care of these pieces of equipment? What safety precautions do you observe as you use or clean these pieces of equipment?

UNIT IV-17

COMMERCIAL KITCHEN EQUIPMENT

SUBJECT:	Storage of Equipment
TASK:	Helps keep equipment in its proper place before and after mealtime
OBJECTIVE:	Be able to list principles for storage of equipment

Each food service establishment will have its own system of storing equipment and supplies for maximum efficiency. Generally speaking, supplies and equipment for a particular preparation should be stored close together to avoid unnecessary steps. For example, ingredients used in baking may be stored close to the scales or utensils used for measuring them. Detergents and cleaning supplies should be stored close to the sink or dishwasher.

The food service employee may be responsible for storing pieces of equipment, such as the mixing machine, the food grinder, the food slicer, and the toaster. After any piece of equipment has been cleaned, it should be stored so that it is easily accessible, yet out of the way, and protected from contamination. It is the responsibility of the food service employee to recognize the necessity of always replacing equipment in the proper place so that is is immediately available to the next shift.

QUESTIONS:

1. What can be used as a guide when deciding where to store supplies?

2. What are some principles to remember in storing dietary equipment?
   a.
   b.
   c.

ASK YOUR TEACHER FOR PART II OF UNIT TEST IV.

UNIT V-1

TECHNIQUES OF FOOD PREPARATION

SUBJECT:	Quality Food Preparation
TASK:	Reads recipes, knows terminology, and follows directions
OBJECTIVES:	Be able to (1) recognize general procedures for food preparation (2) recognize characteristics of standard recipes

GENERAL PROCEDURES IN FOOD PREPARATION

Quality food must be produced and served in food service establishments in a given amount of time and at a reasonable cost in order to satisfy both the customer and the management. Labor costs for food preparation make it necessary for the personnel, equipment, and supplies to be organized efficiently. Speed and accuracy are improved by using time and skills wisely. The following procedures will contribute to the development of speed and accuracy on the part of the food service employee.

1. Read recipe carefully before beginning. To obtain best results, follow directions exactly as given.
2. Check to see that all the necessary ingredients are available.
3. Make substitutions in ingredients only when necessary to reduce cost, to save time, or to make use of surplus commodities on hand.
4. Check to see that the necessary equipment or a suitable substitute is available before beginning.
5. Be able to apply terms used in the recipe.
6. Estimate time required for preparation of the product and plan so that the product will be finished at the proper time.

STANDARD RECIPES

The customer expects the food to be prepared so that it is consistent in appearance and taste each time he orders that particular food. Success in the area of food preparation involves using recipes as guides for preparing food of high quality. In order to achieve quality products, time after time, recipes and methods of food preparation should be standardized.

Have you ever thought about recipes being something like formulas? A chemist carefully follows a formula to make a compound just as a cook must carefully follow a recipe to make a food product. A standard or dependable recipe is, therefore, a must if the result is always to be of the same quality. Standard recipes include:

1. Amount of ingredients
2. Utensils to be used
3. Clear directions about how to combine ingredients
4. Cooking temperatures and length of cooking time
5. Number of servings
6. Size of servings
7. Number of portions per pan, quart, gallon
8. Terms which are familiar to most cooks

QUESTIONS:

1. Mary has been assigned to prepare Prune Muffins. It is now 10:30 a.m. and the muffins are to be served at 12:00. Using the information below, compare Mary's preparation procedure with the general procedures for food preparation given on page ~~A-123~~. Which four procedures in food preparation did Mary fail to observe? A-125

Plain Muffins

2 c. flour, sifted
2 T. sugar
3 t. baking powder
1/2 t. salt

1 egg
1 c. milk
1/4 c. shortening melted

...Sift flour, sugar, baking powder, and salt.
...Beat eggs slightly, add milk and melted shortening.
...Pour egg mixture into dry ingredients.
...Stir only until flour mixture is moistened. Batter should be lumpy. Do not overmix.
...Fill greased muffin pans 2/3 full.
...Bake at 425° F. for 20 to 25 minutes.

Makes 12 medium muffins.

Mary proceeded in the following manner:

1. She melted the shortening and then checked to see that she had all the necessary ingredients.
2. She beat the eggs and added the milk and shortening.
3. Her next step was to sift the flour, sugar, baking powder, and salt and beat the dry ingredients into the liquid mixture.
4. Next, she filled the muffin pans 2/3 full of the mixture.
5. Her last step was to turn on the oven to 425° F. It was then 11:50 a.m.

2. Jane was assigned the task of preparing Cornmeal Muffins. She was instructed to use the preceding recipe for Plain Muffins; however, 1 c. of cornmeal was to be substituted for 1 c. flour. If Jane prepared the muffins as follows, what four procedures in food preparation did she fail to observe?

    1. She sifted the flour, sugar, baking powder, and salt.
    2. She melted the shortening and added the milk.
    3. She then set the oven at 425° F.
    4. She greased the muffin pans.
    5. When she was ready to mix the dry ingredients with the liquid ingredients, she discovered she did not have an egg.

3. The head cook asked Ethel to experiment with three recipes she had found for tuna casserole. Ethel carefully measured and mixed the ingredients in the first recipe and put the casserole into the oven. Ethel had several questions to ask about the recipe as she prepared the casserole: (1) What cooking temperature should be used? (2) How many servings would it provide? (3) What was the meaning of several terms used in the recipe? When the casserole was taken from the oven, it was over-cooked and the servings were smaller than she expected.

    a. What information was missing from the recipe that should be included in a standardized recipe for quantity food preparation?
    b. Why is it especially important to use standardized recipes in a food service establishment?

UNIT V-2

TECHNIQUES OF FOOD PREPARATION

SUBJECT:	Terminology Used in Food Preparation
TASK:	Reads recipes, knows terminology, and follows directions
OBJECTIVES:	Be able to (1) identify the terminology used in recipes (2) identify abbreviations used in recipes (3) apply standard substitutions in recipes (4) select the most efficient measurement for the ingredients in the recipe

To be successful in quantity food preparation, the food service employee must be able to identify terminology and abbreviations used in standard recipes. He must also master certain food preparation techniques. A list of terms are defined below to provide a basis for interpreting directions used in recipes for meats, salads, vegetables, fruits, desserts, and pastries.

TERMS USED IN MEAT COOKERY

Baste...............	to spoon liquid over food as it cooks; the liquid may be drippings of the food
Bouillon............	a clear broth from meat juices
Bouillon Cubes......	a commercially prepared concentrated broth packaged in cubes and used in many recipes
Braise..............	to cook slowly in a covered utensil in a small amount of liquid or in steam; the meat may or may not be browned in a small amount of fat before braising
Bread...............	to roll in bread crumbs, such as breaded cutlets
Broil...............	to cook by exposure to direct heat on a grill or live coals, such as broiled chicken or steaks
Brown...............	to make food become brown by roasting, baking, frying, or broiling

Croquette...........	usually a meat plus other ingredients shaped into cones, breaded, and fried or baked
Crumb...............	to coat with crumbs or top with crumbs, such as a casserole dish
Dredge..............	to sprinkle or coat with flour or other fine substance
Dust with flour.....	sprinkle with flour
Entree..............	a food dish served before the roast or between the chief courses, or the name given to the food dish served as a main course
Filet...............	a choice piece of meat or fish, separated from bones
Flake...............	to break into small bits by using a fork, being careful not to mash the pieces
Fricassee...........	to cook by braising; usually applied to fowl, rabbit, or veal cut into pieces
Goulash.............	a meat stew, consisting of beef or veal, potatoes, onions, paprika, and sauces (the word goulash is Hungarian; the recipe originated in Hungary)
Grill...............	to cook by direct heat
Grind...............	to reduce to particles by cutting, crushing, or grinding
Parmesan............	an Italian cheese
Roast...............	to bake
Sear................	to brown the surface of meat by heating at a high temperature for a short time
Season..............	to make palatable by adding salt, pepper, or spices
Stuff...............	to pack a mixture into a cavity, such as turkey or bell peppers
Truss...............	to secure the wings and legs of a bird with pins or twine

TERMS USED IN PREPARATION OF SALADS, VEGETABLES, AND FRUITS

Au gratin...........	dishes prepared with a sauce, bread crumbs, and cheese, then baked
Blanch..............	to dip into boiling water, making the skins of fruit and nutmeats easy to remove or to precook

Chill	to place in the refrigerator until cooled to temperatures between 40°-45° F.
Chop	to cut into pieces with a sharp tool
Cut	to divide food into small pieces
Dice	to cut into cubes
Garnish	to add a decoration (usually edible) to a food to make it more attractive
Grate	to form tiny flakes by rubbing food with pressure against a grater
Gumbo	a rich creole soup of mixed herbs, vegetables, meats, poultry, and/or shellfish; mixture contains okra
Hollandaise	a cooked sauce consisting of butter, egg yolks, vinegar, salt, and pepper, usually served over vegetables
Hull	to remove the stem and cap from berries; also, to remove husks and silks from corn
Julienne	to cut foods, such as potatoes, cheese, meats, carrots, into pieces the size and shape of match sticks
Marinate	to let food stand in a marinade, usually an oil-acid mixture like French dressing
Mash	to pulverize by pressing and working with a wire or flat-headed device
Mince	to cut or chop into very small pieces
Pare	to cut off the outside covering with the aid of a knife
Peel	to strip off the outside covering without using a knife
Pit	to remove the stone (pit) or seeds from fruit
Puree	any mashed or strained food
Scallop	to bake food, usually cut in pieces, covered with a sauce or other liquid and crumbs, such as scalloped potatoes

Tartar	an uncooked sauce made with mayonnaise, chopped parsley, capers, and shallots, usually served with seafood
Thaw	to bring to a temperature above freezing
Unmold	to loosen and remove from a container

SURFACE COOKING TERMS

Boil	to cook in water or other liquid until bubbles rise continuously and break on the surface
Coat the Spoon	to film a metal spoon with a thickened sauce
Cool	to lower the temperature
Deep-fat Fry	to cook in deep fat
Dilute	to lessen the strength, thickness, or flavor of a mixture, usually done by adding water
Dip	to plunge into liquid or a dry ingredient until covered, then remove quickly
Dissolve	to combine or mix a solid ingredient with a liquid until a solution is formed
Fry	to cook in fat
Melt	to liquefy by heat
Pan	to cook in a covered pan in a small amount of water or fat
Pan-broil	to cook uncovered on a hot ungreased surface, usually a frying pan
Pan-fry	to cook in a small amount of fat
Parboil	to boil until partially cooked
Poach	to cook in a hot liquid, using precautions to retain shape, such as poached eggs
Saute	to brown quickly in a small amount of fat, turning frequently
Scald	to heat to a temperature just below the boiling point
Simmer	to cook in a liquid at a temperature of about 185° F., bubbles form slowly and break below the surface

Home Economics
Instructional Materials Center
Lubbock, Texas

V-2

BAKING AND PASTRY TERMS

Beat	to make a mixture smooth, using an up-and-over motion
Blend	to mix two or more ingredients thoroughly
Brush	to spread melted fat with a pastry brush
Cream	to mix one or more foods until smooth and creamy, usually applies to fat and sugar
Cut and Fold	to combine ingredients by using an up and down motion with a pastry blender
Cut-in	to break fat into small particles by using two knives or a pastry blender
Dot	to cover with small particles, as to dot with butter
Flute	to make an edge with a scalloped effect; as on pie crust
Fold	to combine by using two motions, cutting vertically through the mixture and turning mixture over and over
Knead	to manipulate with a pressing motion accompanied by folding and stretching, such as yeast breads
Leaven	to make light by an agent, such as yeast or baking powder
Level Off	to move the level edge of a knife or spatula across the top edge of a container, scraping away the excess mixture
Meringue	a mixture of stiffly beaten egg whites and sugar, which is slightly browned in the oven
Mix	to combine ingredients
Mode (a la)	"in the fashion"--Example: Pie a la mode is a piece of pie with ice cream.
Sift	to separate into fine particles with a sieve
Souffle	a very light baked dish that is made light by stiffly beaten egg whites, such as cheese souffle

Steam	to cook in steam with or without pressure
Steep	to let stand in liquid below the boiling point in order to bring out flavor, color, and other qualities
Stew	to simmer in a small quantity of liquid
Stir	to mix food materials with a circular motion
Timbale	a pastry crust filled with various ingredients
Toast	to brown by means of dry heat
Whip	to rapidly beat cream, eggs, or gelatin dishes to incorporate air and increase volume

QUESTIONS:

1. Differentiate between the following terms:

    a. Pan-fry - Saute
    b. Dice - Mince
    c. Boil - Simmer
    d. Blend - Cream
    e. Chill - Cool
    f. Boil - Parboil
    g. Beat - Whip
    h. Brush - Dot
    i. Cut - Cut-in
    j. Blanch - Scald

2. What are two differences between Hollandaise and tartar sauce?

3. Jane was assigned the task of making a cheese souffle. Will she mix, stir, or whip the egg whites? Why?

4. On a separate piece of paper make a list of numbers from 1 to 15. After each number place the letter of the definition which best fits the terms listed below.

TERM	DEFINITION
1. Au gratin	A. Small cakes
2. Bake	B. Any mashed or strained food
3. Baste	C. To simmer in a small quantity of liquid
4. Bread	D. To cook by braising
5. Dilute	E. To separate with a sieve
6. Garnish	F. With cheese
7. Parmesan	G. To mix foods with a circular motion
8. Puree	H. To brown the surface of meat with intense heat
9. Marinate	I. To strip off the outer coating
10. Melt	J. To roll in bread crumbs
11. Sift	K. To lessen the strength by adding liquid
12. Stew	L. To liquefy by heat
13. Stir	M. To let food stand in a marinade or dressing
14. Sear	N. To cook in a covered pan
15. Peel	O. To cook by dry heat
	P. To decorate
	Q. Italian cheese
	R. To moisten while cooking

5. Classify the following food terms according to the four food preparation centers where they most probably would be used.

bread
brown
chop
cream
cut-in
deep-fat fry

garnish
grate
knead
marinate
mix
peel

baste
sift
braise
scallop
whip
baste

broil
blend
mince
sear
blanch

Meat Center	Vegetable Center (cooked)	Salad Center (uncooked)	Flour Mixture Preparation Center

COMMON ABBREVIATIONS FOR FOOD PREPARATION

Abbreviations are used to save time and space in writing recipes. It is necessary that you know what they mean before you can follow a recipe successfully and produce a quality product. Abbreviations which are commonly used in food preparation are given below:

t.-ts.-tsp. = teaspoon
T.-tb.-tbsp. = tablespoon
c. = cup
pt. = pint
qt. = quart
gal. = gallon
pk. = peck
bu. = bushel
sq. = square
°F. = degrees Fahrenheit
hr. = hour
min. = minute

s. or sml. = small
med. = medium
spk. = speck
f.g. = few grains
oz. = ounce
lb. = pound
lg. or lge. = large
wt. = weight
cal. = calorie
M.S.G. = Monosodium Glutamate
temp. = temperature
sec. = second

QUESTIONS:

1. Write the abbreviations for each word that is underlined in the following recipes:

Chili Con Carne (for 50)

AMOUNT	INGREDIENT
a. 3 pounds	Beans, kidney
b. 1 gallon	Water, boiling
	ADD
c. 9 pounds	Beef, ground
d. 8 ounces	Onion, chopped
	ADD
e. 1-1/2 quarts	Tomato puree
f. 2 ounces	Chili powder
g. 3-4 ounces	Cumin seed, ground
h. 3 tablespoons	Salt
i. 3 gallons	Water to make a total volume of 3 gallons
j. Let simmer about 3 hours	Let simmer about 3 hours
	ADD, while stirring
k. 5 ounces	Flour
1. 2 cups	Water, cold

Fudge

m. 2 cups sugar
n. 2/3 cup milk
o. 1-1/2 tablespoons light corn syrup
p. 2 squares chocolate
q. few grains salt
r. 3 tablespoons butter
s. 1 teaspoon vanilla extract

2. Write the word for each of the following abbreviated terms:

a. 10 cal. per slice
b. 1 lb. sugar
c. Cook at 350° F.
d. 2 c. water
e. Beat for 10 min.
f. f.g. pepper
g. bu. potatoes
h. Let stand for 20 sec.
i. 1 t. salt
j. 1 med. orange
k. 2 tbsp. chopped onion
l. 3 T. cornstarch
m. Bake for 1 hr.
n. 1 tsp. cinnamon
o. 4 T. M.S.G.
p. 1 lg. apple
q. 5 oz. coconut
r. Cool at room temp.
s. 1 sml. banana
t. Wt. of baked cake

SUBSTITUTIONS

The food service employee should become familiar with the substitutions commonly used in recipes. Substitutions may be made to cut down on cost, to save time, to increase the food value, or to make use of surplus commodities.

Standard substitutions are:

1 sq. chocolate = 3 T. cocoa and 1 T. fat
1 c. cake or pastry flour = 7/8 c. all-purpose flour plus 2 T. cornstarch
1 T. cornstarch = 2 T. flour (for thickening)
1 t. baking powder = 1/4 t. soda and 1/2 t. cream of tartar
1 c. milk = 1/2 c. evaporated milk and 1/2 c. water
= 1 c. reconstituted nonfat dry milk plus 2 t. table fat
1 c. sour milk or buttermilk = 1 c. fresh milk plus 1 T. vinegar or lemon juice (let stand 5 minutes)
1 c. sour milk and 1 t. soda in flour mixture = 1 c. fresh milk plus 3 t. baking ~~soda~~ powder
1 T. corn syrup (in candy) = 7/8 t. cream of tartar
1 c. butter = 1 c. margarine or 7/8 c. fat plus 1/2 t. salt
1 whole egg = 2 egg yolks or 2 T. dried whole egg plus 2-1/2 T. water
1 c. honey = 1 to 1-1/4 c. sugar plus 1/4 c. liquid

QUESTIONS:

1. Mary's employer asked her to make a chocolate cake. The recipe called for 2 cups of cake flour, 1-2/3 c. sugar, 1/2 c. shortening, 1 t. salt, 3 sq. melted chocolate, 1 c. sour milk, 1 t. soda, 3 eggs, and 1 t. vanilla. On checking her supplies Mary found all the needed ingredients except:

   3 sqs. chocolate
   1 c. sour milk
   2 c. cake flour
   1 t. soda

   If Mary uses cocoa, sweet milk, and all-purpose flour for the items she does not have, what amounts of the substitutions will she use?

2. Mary wants to make fudge icing for the cake.

The recipe called for:			Mary found:
2 c. sugar			sugar
1 c. milk	(a)	*	non-fat dry milk
1/4 t. salt			salt
2 sq. chocolate	(b)	*	cocoa
2 T. light corn syrup	(c)	*	cream of tartar
2 T. fat			fat
1 t. vanilla			vanilla

What substitutions can Mary use for the starred (*) ingredients? Give the amounts needed in each case and any additional ingredients she will need.

EQUIVALENTS

The successful use of a recipe depends largely upon accuracy in measuring the ingredients. To be able to measure accurately, one must become familiar with the commonly used equivalents listed below:

EQUIVALENTS OF COMMON MEASURES

3 t............ = 1 T.
16 T............ = 1 c.
8 fluid oz..... = 1 c.
2 c............ = 1 pt.
2 pt........... = 1 qt.
4 qt........... = 1 gal.
8 qt.......... = 1 pk.
4 pk.......... = 1 bu.
16 oz.......... = 1 lb.
spk........... = less than 1/8 t.
f.g........... = less than 1/8 t.
pinch......... = less than 1/8 t.

QUESTIONS:

1. Write the equivalent for the following measurements:

a. 3 t. =
b. 16 T. =
c. 8 fluid oz. =
d. 2 c. =
e. 8 quarts =
f. 4 pk. =
g. pinch =
h. 2 pt. =
i. 4 qt. =
j. 16 oz. =
k. f.g. =
l. spk. =
m. 1/4 c. = _____ T.
n. 1/2 c. = _____ T.
o. 3/4 c. = _____ T.

2. Josie will help in the baking area this week. She has been asked to double the amount of ingredients in a cookie recipe for the baker. Show what amounts, using the largest equivalents, are needed of each ingredient, after doubling the recipe.

_____ a. 1 c. sugar
_____ b. 1 c. margarine
_____ c. 2 t. vanilla
_____ d. 12 oz. flour
_____ e. 2 T. cocoa

3. Lynn's work station for this week is in the serving area. One of her tasks on the work sheet is to prepare 1-1/4 gal. fruit punch. The recipe she is using makes 2-1/2 gal. punch. Show how she will adjust the measurements to fit her task (use largest equivalent).

_____ a. 4-1/2 c. sugar
_____ b. 3 c. water
_____ c. 2-6 oz. cans orange juice, frozen
_____ d. 2-6 oz. cans lemon juice, frozen
_____ e. 1 gal. water makes 2-1/2 gal. punch

4. One of the tasks on Sue's work sheet today is to measure ingredients for apple crisp. A red-penciled note attached to the recipe said "make 3 X the recipe." Complete the blanks to show largest equivalent measurement she should use when she triples the recipe.

_____ a. 10 lb. sliced apples
_____ b. 8 oz. sugar
_____ c. 1/4 c. lemon juice
_____ d. 1 lb. 4 oz. margarine
_____ e. 12 oz. flour
_____ f. 12 oz. rolled oats, uncooked
_____ g. 2 lb. brown sugar

5. Ann is preparing a salad using the ingredients listed below. Convert the amounts called for in the recipe into the largest equivalent to speed up the measuring process.

_____ a. 4 qt. lettuce
_____ b. 2 pts. tomatoes
_____ c. 2 c. celery
_____ d. 2 c. radishes
_____ e. 16 T. oil
_____ f. 8 oz. vinegar
_____ g. 3 t. sugar
_____ h. 3 t. paprika

6. Mary is helping the chef by measuring the ingredients for a cheese sauce. Figure the amounts, to the largest equivalents, that she will use:

_____ a. 4 pts. milk
_____ b. 8 T. fat
_____ c. 8 T. flour
_____ d. 3 t. salt
_____ e. 24 oz. grated cheese

UNIT V-3

TECHNIQUES OF FOOD PREPARATION

SUBJECT:	Standard Weights and Measurements Used in Food Preparation
TASK:	Measures and weighs food according to specifications listed in standard recipes
OBJECTIVES:	Be able to (1) list procedures for using standard weights and measurements accurately and correctly (2) describe procedures for use and care of scales and balances

The food service employee should become familiar with the procedures and measurements which are used for measuring ingredients at the training station. Selection of the proper measuring equipment is a primary factor in being able to prepare standard food products consistently. After choosing the appropriate measure for the task involved, skill must be developed in using it correctly.

Quality in food production cannot be achieved unless the amounts called for in the recipe are measured carefully. Measurements of ingredients must be level in order to be accurate. Suggestions for using measuring equipment are given in this unit.

Types of measures include:

1. U.S. Standard graduated dry measuring cups--stainless steel or aluminum preferred
   * Set or "nest" of four measures including 1 cup, 1/2 cup, 1/3 cup, and 1/4 cup
2. Liquid measuring equipment--glass or clear plastic recommended; the space at the top above the graduated measurements prevents spilling the liquids
   * 1 cup size with lines indicating 1/4 cup intervals
   * 1 pint size with lines indicating cup intervals
   * 1 quart size with lines indicating cup intervals
   * 2 quart size with lines indicating cup intervals
   * 1 gallon size with lines indicating quart intervals

3. Measuring cup for either liquid or dry ingredients--has limited use for dry ingredients because only full cup measurements can be leveled off.

   * 1 cup measure with fractions indicated by ridges on the outside and grooves on the inside

4. Measuring and mixing bowl set

   * 1 cup, 1-1/2 pint, and 2 quart containers which have tapered pouring spouts

5. Measuring spoons

   * U.S. Standard graduated set including 1/4 teaspoon, 1/2 teaspoon, 1 teaspoon, and 1 tablespoon

Suggestions to be considered in using the various types of measuring equipment are:

1. Cups which have the rim above the "full cup" line and a pouring lip or spout are used for measuring liquids.

2. Cups without the rim or pouring lip are used for measuring dry ingredients and shortening.

3. Graduated spoons are used for measuring small amounts of liquid and dry ingredients.

4. Larger measures are used, whenever possible, to avoid filling the smaller measures several times.

How to Measure:

1. Flour............................	Sift flour before measuring to make it light and to remove any lumps. Spoon or scoop sifted flour gently into cup. Do not shake, pack, or hit the side of the measuring cup.
2. Confectioners' sugar.............	Measure in the same way as flour.
3. Brown sugar......................	Pack firmly into the measuring container (unless stated otherwise) to insure accuracy of the measurement. When loosely packed, the amounts of brown sugar vary from one measuring to the next.
4. Fats.............................	Measure by pressing firmly into measuring container and leveling off.

5. Liquids	Place measuring cup on a flat surface and read measurement at eye level.
6. Few grains, speck, or a pinch	Use amount of the ingredient which can be held between thumb and forefinger.
7. Fractions of a teaspoon or tablespoon	Dip spoon into ingredients. Level off excess ingredients using a knife or spatula against the surface edge of the spoon. Run knife lengthwise through the center of the spoon for 1/2 spoonful and then crosswise through the center of the spoon to divide the ingredients into 1/4.

Tips to be followed in the care of measuring equipment:

1. Wash thoroughly and dry after each use.
2. Use plastic measures carefully because they warp easily and are then no longer accurate.
3. Handle glass measures carefully because they chip easily.
4. Care for measuring spoons by using them only for measuring--not for mixing or stirring.
5. Store measuring equipment carefully because bent measures are no longer accurate.

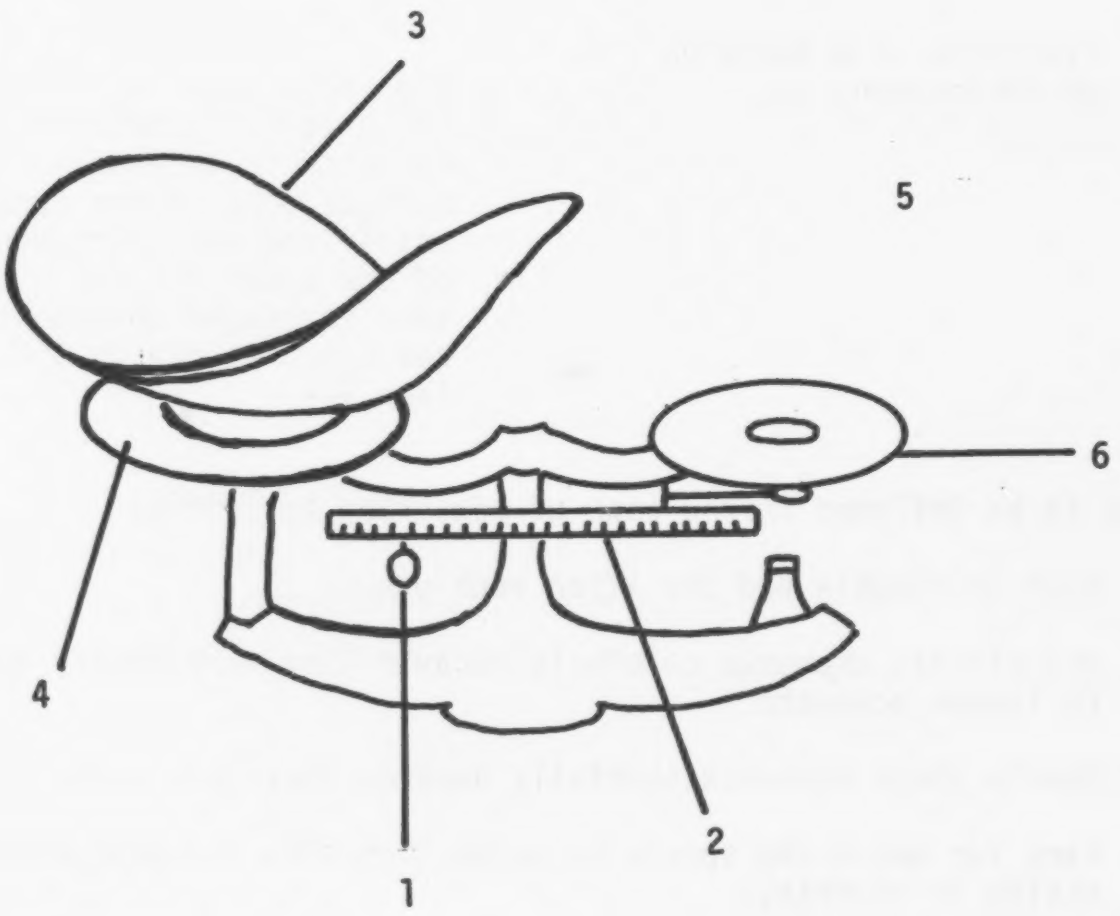
Functions of Scales and Balances

Scales and balances are used in quantity food preparation to save time and assure accuracy. Because ingredients are not all the same weight, it is not always correct to say that two cups of an ingredient equal one pound. When the amounts in a recipe are expressed in ounces or pounds, therefore, it is important that they be weighed instead of measured.

Scales and other equipment used for weighing must be kept clean. This may be done by wiping the scale with a damp cloth after weighing each ingredient. At the end of the day, check to see that ingredients have not accumulated on the equipment parts.

Several acceptable types or models of scales and balances are used in food service. These include (1) the spring-type table model which is used for weighing dry ingredients, such as beans, macaroni, rice, cheese, fruits, and vegetables; (2) the gravity-activated type (called the balance scale) which is used for weighing batters and mixes; (3) the portion scale which is used for weighing portions of food and rolls; (4) the baker's scale which is used for weighing ingredients or for scaling dough (see illustration). For instance, dough for a loaf of bread may be weighed for uniform sized loaves.

BAKER'S SCALE



A suggested method of operation for the illustrated baker's scale is:

1. Place the weight indicator (1) at zero on the scaled brass beam (2), which indicates ounces up to one pound.

2. Center the scoop (3) on the left-hand platform (4).

3. Balance the scoop by placing the proper weight (5) on the right-hand platform (6). (Weights are used to balance the two platforms. The left platform should be slightly lower than the right platform.)

4. The ingredients to be weighed are placed in the scoop (3) on the left-hand platform (4). Move the weight indicator (1) on the brass beam (2) to the right until the desired weight is found and the two platforms are balanced. If necessary, add or remove a portion of the ingredients to make them balance.

5. When the weighing procedure has been completed, remove the ingredients or food items being weighed and return the scales to a balanced position.

QUESTIONS:

1. All measurements must be level to be accurate. Describe the procedure used to level dry measurements.

2. Why is it recommended that both glass and metal measuring cups be used in food preparation?

3. Why should brown sugar be packed firmly when measuring?

4. Fractional measurements are possible without a measuring spoon of that specific fraction. Explain how you would measure 1/8 teaspoon allspice.

5. If a recipe calls for 3 teaspoons of salt, what larger measure could be used?

6. Why is flour sifted before measuring?

7. Why should standard measures be used in food preparation?

8. Why is weighing ingredients recommended for quantity food preparation?

UNIT V-4

TECHNIQUES OF FOOD PREPARATION

SUBJECT: Techniques of Portioning Food

TASKS: Assembles orders and places them on plates and trays

Verifies orders by scanning filled plates to insure specified portions and quality of food

OBJECTIVES: Be able to (1) give reasons for portioning food
(2) list methods used to portion foods for serving

The management of the food service operation will determine the appropriate portion size or the amount of food to be served to the customer. This decision is influenced by the type of meals, food choices, serving methods, clientele, and the cost of food and supplies.

Establishing a portion of a determined size will:

1. Enable the food service personnel to request correct amounts of food and supplies, without overstocking.
2. Make possible the serving of freshly prepared food daily, thus preventing the necessity of serving or planning use of leftovers.
3. Cut down on waste and loss of food nutrients.
4. Prevent under-production as well as over-production of food to be served, by using standard yields, recipes, and purchases.
5. Simplify food preparation.
6. Reduce the amount of time required for serving customer's plate.
7. Satisfy the customers' food needs.
8. Provide attractive and uniform servings.
9. Establish a cost control system.

Whatever the determined size of the portion may be, it should appear ample, without looking too standardized. One may accomplish this by selecting the proper size and color of dish and by using skillful methods and a variety of arrangements to improve the appearance of the food.

The selection and use of the proper equipment for portioning the different foods makes the task easier. The food service employee should be familiar with the established list of portion sizes used in the training station. The list will include portions per pound, piece, slice, package, or count volume. The employee should learn the size dish or plate on which foods are to be served and the equipment that is required for serving specified foods.

Pre-portioning certain foods assures serving the correct amount during the busy period. Accuracy in pre-portioning is made possible by using the following equipment and portioned foods:

1. Standard size pans which permit the food to be cut into the number of servings indicated in the recipe. The use of a stainless steel ruler or marked pans will insure accurate portions. Examples: brownies, gelatin salad, cake.

2. Standard scoops, ladles, dippers, spoons, ice cream dippers, and tongs in various sizes for specific foods. Examples: mashed potatoes, ice cream, gravy, sandwich fillings, some salads and desserts, meat balls.

3. Individual and correctly sized casseroles, molds, custard cups, souffle cups, and other dishes. Examples: macaroni and cheese casserole, baked custard, gelatin salads.

4. Standardized scales for weighing portions. Example: meat.

5. Slicing machines or slicers which give portions of the correct size for breads, vegetables, and meats. Cutters and slicers are also used for butter and cheese.

6. Individual size cream pitchers and individual pots or vacuum containers for hot beverages.

7. Pre-packaged portions of sugar, catsup, mayonnaise, salt, pepper, crackers, cereal, milk, and ice cream.

8. Meats purchased in slices and served or cut into desired number of uniform servings.

If serving the food is one of your tasks, be careful to make the serving the exact size specified by your supervisor. Just serving each customer one bite too much of green beans cost one food service establishment $4.00. One extra bite of roast beef at that establishment would have added up to a cost of over $12.00 in just one day. This may not seem like very much but it just might happen to add up to the amount of your salary! Over a period of time it could be the difference between the business showing a profit or showing a loss.

QUESTIONS:

1. _____ True or False: The food service employee decides on the amount or portion of food to be served.

2. Portioned servings are necessary for efficient, economical food service operation. Factors used to determine portion sizes and amounts are:

   a. Type of meal served
   b.
   c.
   d.
   e.

3. Management studies in food service operation consistently stress the importance of serving portioned food. What might be five results of not serving portioned foods?

4. What can be done to make pre-determined portions look appetizing when served?
   a.
   b.

5. Name five pre-packaged items that may be used in serving customers.

6. Accuracy in pre-portioning is made possible by the use of the following equipment. Match the appropriate food or foods to be portioned with each piece of equipment. Food items may be used more than once.

PRE-PORTIONING METHOD	FOOD ITEM
_____a. Standard size pan	1. Macaroni and cheese casseroles
_____b. Standard scoop, dipper	2. Meat
_____c. Individual baking dish	3. Ice cream
_____d. Standard scales	4. Gelatin salad
_____e. Standard slicer	5. Bread
_____f. Individual carton	6. Cereal

UNIT V-5

TECHNIQUES OF FOOD PREPARATION

SUBJECT: Work Simplification and Work Schedules

TASK: Plans work schedule so foods are ready at serving time

OBJECTIVES: Be able to (1) define the purpose and need for work simplification
(2) adapt motion economy principles to job performance

REFERENCE: Kotschevar, L. H. Quantity Food Production. Berkeley, California: McCutchan Publishing Corporation. 1966, pp. 45-78.

The increased minimum wage is making it imperative that administrators of food service establishments look for ways to improve the efficiency of their operations. Each employee must perform a day's work for a day's pay if the food service establishment is to operate within its budget. One cause of inefficient operations is employee fatigue with a resultant drop in energy, enthusiasm, and output. Fatigue may be due to factors in the employee's personal life, such as lack of sleep, problems at home, or improper food. In many cases, however, it may be due to working conditions or procedures on the job.

One method of reducing employee fatigue is work simplification. Work simplification has been defined as "seeking the simplest, easiest, and quickest method of doing work." This does not mean that the employee must work harder and faster, but that the nonessential parts of the operation are eliminated.

The employee must be interested and cooperative in order for a work simplification program to succeed. Wasted effort can be avoided when the worker becomes motion conscious, learns to use simple rules, and understands the benefits of work simplification.

Some general guides to follow for reducing fatigue and increasing the amount of work done are:

1. Eliminate unnecessary steps.
2. Assemble materials before beginning to work.
3. Select the best tool for the job.
4. Maintain good posture.
5. Clean up as the job is completed.

Let's follow Susie while she carries out one of her jobs to see how motion conscious she is. She reads on the work schedule that she is to prepare the salad for the noon meal. The first item on the recipe card is lettuce, so she goes to the walk-in refrigerator, gets four heads of lettuce, takes them to the sink, and then returns to get four more heads of lettuce. The procedure she follows to remove the cores is to bend over the sink, pick the lettuce up in her right hand, transfer it to her left hand, pick up the knife, remove the core with her right hand, and put the head of lettuce on the drainboard.

Next Susie carries the lettuce, two or three heads at a time, to the salad area. After tearing the lettuce leaves into bite-size pieces, she looks at the recipe again. Carrots are listed as the next ingredient. Back to the walk-in refrigerator Susie goes, picks up the carrots and walks to the sink. She then goes over to the drawer to get a French knife to peel the carrots and then slices them, one at a time, holding the carrots in her hands.

You have probably guessed that the next ingredient is celery. After going to the walk-in for the celery and carrying it to the sink to mince it, she goes back to the drawer to get a paring knife to cut the celery into small pieces. She cuts one stalk of celery at a time and then picks up the pieces and puts them in the salad container.

What rules of work simplification and principles of motion economy did Susie break? Refer to the information in this unit and the eighteen principles of motion economy in the assigned reading and see if you can catch her mistakes. Then continue reading this unit.

Were these the mistakes you found?

1. Susie wasted many steps collecting the ingredients and tools for the salad. If she had carefully read the recipe she could have taken a tray or large container to the refrigerator and picked up all the items in one trip. She could also have made only one trip to the drawer for knives if she had planned ahead. Thus, she needs to learn to "eliminate unnecessary steps" and to "assemble materials before beginning to work."

2. Susie violated principle 2, which is "work hands in unison," when she changed hands so often while coring the lettuce.

3. Bending over the sink, instead of putting the lettuce on a more comfortable working height, was a violation of principle 12, which is "work at a comfortable height."

4. The use of a French knife to peel the carrots and failure to put the carrots down on a cutting surface when slicing them was a violation of principle 4, which is "use motions easiest for the worker." Using a French knife for peeling would be awkward and tiring and was not a selection of the best tool for the job.

5. Use of a paring knife, instead of a French knife, to chop the celery was another violation of principle 4 and another poor choice of equipment. Susie could also have used principle 6, which is "use gravity to do work," if she had chopped the celery on a board

near the edge of the counter and then pushed it into a container.

The above situation is exaggerated, but many workers waste motions without being aware that there is an easier, quicker way to do things. Think about the way you carry out your duties. Don't be an employee like Susie--do make every motion count!

QUESTIONS:

1. When Mr. Robinson talked with June about her job as a food service employee, he discussed the two types of planning that are used to obtain good worker productivity. What are they?

2. What is work simplification?

3. Mrs. Mayes, the assistant cook, was explaining Lucy's tasks as cook's helper. She said, "Work simplification is one of the most valuable skills you can learn and apply to your job." What are the steps in work simplification?

4. Is work simplification always the work of an engineer? If not, who else may come up with suggestions?

5. At one of the meetings for new employees, Betty heard an industrial engineer say that, "One of the big enemies of production is fatigue." Then he discussed the two types of fatigue which all workers experience. What are they?

6. What are the three types of rest?

7. What does "work smarter, not harder" mean?

8. How do engineers attempt to reduce production time?

9. Motions are classified into finger, hand, arm, and body. Why do engineers suggest that an attempt be made to use the lowest classification of body movements?

10. What is the result of using the principles of motion economy?

11. What are the three parts of a job?

12. Which principle of motion economy could be used by the food service employee to most efficiently perform the following? (Refer to the reference Quantity Food Production, pages 61-66.)
    a. Arrange lettuce and peach halves on salad plates.
    b. Start garbage disposal.
    c. Wash surface of a refrigerator.

   d. Chop ingredients for a salad.
   e. Make sandwiches.

13. Today Linda has been assigned to help prepare salads. The salads are a chef's salad, a gelatin salad, cabbage slaw, and potato salad. They should be completed and ready to serve in four hours. Which salad should be prepared first? Why? Which salad will probably be made second?

True or false.

14. A plan of work will help you accomplish more.

15. Each job can be simplified.

16. One should work at top speed in order to get more done.

17. Posture does not affect the use of energy in any activity.

18. Job training is not necessary, anyone can do a piece of work.

19. Four types of rest must be provided for workers to minimize fatigue.

20. Fatigue is an enemy of production.

21. Work simplification is the study of tasks and operations to determine the most efficient method of performance.

ASSIGNMENT:

Analyze one job you do at your training station. What principles of motion economy could you apply to the job? (Turn this assignment in to your teacher.)

Home Economics
Instructional Materials Center
Lubbock, Texas

UNIT VI-1

FOOD PRODUCTION

SUBJECT: Customer Satisfaction

TASK: Follows standard procedures for preparing a variety of foods

OBJECTIVE: Be able to recognize importance of consistently preparing quality food

The primary objectives of any food service operation are to:

1. Maintain acceptable standards of food preparation.
2. Prepare and serve food of high quality.
3. Provide well balanced, varied meals.
4. Give prompt and courteous service.
5. Keep costs consistent with the service offered.
6. Offer adequate and desirable facilities.
7. Maintain high standards of cleanliness.
8. Provide attractive, well prepared, flavorful, satisfying, and nourishing food.

The objectives may be achieved by the use of carefully planned food preparation procedures which are based on a minimum of time, energy, and materials. The food service employee must be aware that he is responsible for helping to create customer satisfaction. The degree to which the employee helps to meet the objectives of the establishment will influence his success on the job.

Throughout this unit, you will be studying techniques of preparing various foods. Remember that the customer's satisfaction is dependent upon the variety, taste, flavor, and appearance of the food being served.

To be of high quality, food must be prepared properly and served attractively. The food should not only look appetizing, but it should be appetizing both in aroma and taste. Good food is palatable, nourishing, and appealing to the eye.

Eye appeal in food preparation may be accomplished by the skillful use of form, texture, color, and arrangement of food on the plate. The size of the portion, contrast in food combinations, and the appropriate use of garnishes add to the eye appeal of food being served.

Palatability of the food is influenced by its odor, flavor, temperature, texture, freshness, and consistency. Serving foods at the proper temperature contributes to palatability.

The food service employee should be able to judge quickly--by sight, odor, and taste--the quality of the foods being prepared and served. Experience and skill are required to develop techniques of evaluating food; however, success of the business depends on consistent and dependable food service. The customer expects food of the same quality every time he goes to the food service establishment.

Regardless of the food you are assigned to prepare, remember the importance of:

1. Preparing the food properly to insure its palatability and its nourishing qualities.
2. Serving the food attractively to insure its eye appeal.

ASSIGNMENT:

Write at least a page describing ways in which you can help to insure customer satisfaction. Be prepared to discuss your ideas with the teacher.

Home Economics
Instructional Materials Center
Lubbock, Texas

UNIT VI-2

FOOD PRODUCTION

SUBJECT: Preparation of Coffee and Tea

TASKS: Makes beverages, such as coffee and tea, and places them in serving locations

Evaluates quality of food prepared

OBJECTIVES: Be able to
(1) list parts of the coffee urn
(2) describe procedure for operating the coffee urn
(3) list steps in cleaning and caring for the coffee urn
(4) describe procedure for using the vacuum coffee maker
(5) list steps in cleaning the vacuum coffee maker
(6) describe procedure for making tea

COFFEE

The ability to make good coffee is simply a matter of using the right combination of equipment, cleaning the equipment properly, and measuring the water and the coffee accurately. Coffee should be served hot and fresh. It should be sparkling clear and have a pleasing taste and aroma.

Underbrewing causes the coffee to have an unpleasant flavor, lack body, and taste watery. Overbrewing results in a bitter taste and cloudy or muddy appearance. Warmed-over coffee results in an unpleasant, rancid, or oily taste.

Coffee used in food service is ground, instant, or decaffeinated. Ground coffee is available in regular, drip, and fine grind. Regular grind coffee is used for percolaters. The drip grind is recommended for drip and vacuum coffee makers; however, the fine grind may also be used for these coffee makers. Instant coffee is powdered coffee which readily dissolves in hot or cold water and requires no special preparation. Decaffeinated coffee may be ground or instant. This coffee retains a maximum amount of coffee flavor, but it does not act as a stimulant because the caffeine has been removed.

In food service kitchens, coffee is generally made in either the coffee urn or the vacuum coffee maker. Both of these types of coffee equipment are discussed in this unit.

Coffee makers for instant coffee are also available. These may be made of stainless steel, silver, nickel, chrome, or other less durable metals. Glass and porcelain do not give off metallic flavors, but they require extra care to avoid chipping and breaking.

COFFEE URNS

Coffee urns are actually enlarged versions of the home drip coffee makers and are used where large amounts of coffee are needed. Urns are available in many sizes and make up to 125 gallons of coffee. Two smaller urns are generally better than one large urn because the coffee may then be made alternately to insure plenty of fresh coffee.

A good coffee urn is one that has been designed for quick cleaning and easy assembly of parts. It should have a minimum number of parts.

A filter should be provided which insures a clear cup of coffee. Among the filters often used are: (a) paper or cloth filters, (b) perforated plates, and (c) wire screens. The paper or cloth filters, if used correctly, will produce a clear cup of coffee. The perforated plates and wire screens will vary in the quality of the coffee produced.

The steps for making coffee in an urn are:

- Rinse urn thoroughly with hot water before using.
- Fill urn with fresh cold water.
- Turn on heat.
- Carefully place clean filter into urn basket or fit clean bag into urn.
- Pour correct amount of dry coffee into filtering device, spread evenly, and add water.

  If urn is not self-pouring, release a gallon of boiling water into a container and pour over dry coffee with a steady circular motion. Continue to add water until correct amount is in the urn. Generally the water level is determined by the gauge.

  If urn is self-pouring, allow steam pressure to force hot water over dry coffee through a nozzle head, watching water gauge to determine the amount of water being added.
- Hold temperature at 185° F. for amount of time required for coffee to brew.
- Remove bag of grounds from the urn, dump the grounds immediately, wash bag thoroughly, and soak in cold water.
- Release a gallon of coffee from the urn and pour back into the top of the urn, giving a mixing action to produce a unified blend.

* Check temperature gauge again, maintaining a temperature of 185° F. until served.

The proper cleaning of equipment is necessary in order to produce a cup of coffee of high quality. Deposits in the equipment interfere with the flavor. Some of these deposits are not visible, but they are in the form of a thin film of oil which can cause an "off-flavor" in the coffee. Proper cleaning supplies and equipment should be used, and cleaning should be done by an experienced employee.

The areas of the urn which require special emphasis in cleaning are faucets, glass gauges, urn bags, and metal filter baskets. The following method may be used in cleaning a coffee urn immediately after each brewing:

Use hot water, brushing sides well.

Rinse urn until hot water runs clean and clear.

Rinse inside of cover.

Unscrew top of glass gauge, brush, and rinse.

Remove and clean cap at end of the faucet; scrub the pipe leading from center of urn. If faucet has no caps, take it apart.

Scrub spigot and rinse thoroughly with hot water.

Place several gallons of fresh water in urn; leave cover slightly ajar.

Empty and rinse urn before using.

More thorough cleaning of the urn usually is done twice a week, using this procedure:

Fill outer jacket 3/4 full of water, turn on heat.

Fill urn jar 3/4 full of water and add cleaner according to manufacturer's directions.

Use long thin brush and cleaner on gauge, faucet, pipes, plugs, and other parts.

Take the faucet apart, clean well, rinse thoroughly, and reassemble.

Scrub and rinse inside of urn three or four times with hot water, continuing until all traces of cleaning solution are removed.

Check spray heads to see that all holes are open, using stiff wire to open.

Leave a few gallons of fresh warm water in urn until next use (cold water may crack hot liner).

Empty urn and rinse before use.

Some pointers to keep in mind when cleaning filters, urn bags, and baskets are:

Rinse new bags or cloth filters with water at 140° F. to remove sizing.

Rinse in hot water after use (do not use soap, bleach, or detergent).

Store in a clean container of fresh cold water, when not in use, to prevent urn bags or filter cloths from becoming rancid or picking up food odors.

Replace bags or filter cloths if undesirable odor persists.

Rinse urn basket after each use and clean thoroughly at end of day.

Scour with cleaner and stiff brush. Never use steel wool or abrasive.

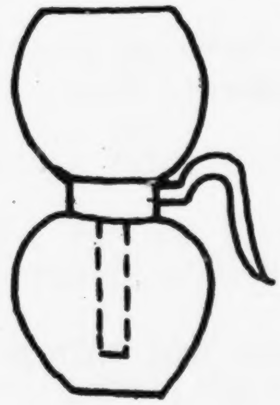
Rinse urn basket thoroughly after cleaning.

Guard against pits and scratches which catch dirt or coffee deposits.

VACUUM COFFEE MAKERS

The steps for making coffee with vacuum coffee makers are:

* Fill the lower bowl to correct level with fresh cold water; place on heat.
* Rinse clean filter cloth in cold water; place over filtering device in top bowl.
* Pour measured coffee into top bowl.
* Place top firmly into lower bowl when water begins to boil and twist slightly.



Vacuum Coffee Maker

* Allow water to be forced up into top bowl.
* Stir water for 30 seconds and allow two to four minutes contact time.

- Reduce heat to create vacuum in bottom bowl, pulling brew down through the filter.
- Remove upper bowl when complete.
- Set brew over heat to maintain 185° F. temperature.

Vacuum coffee makers should be cleaned after each use. A brush may be used to scrub all parts of the top and lower bowl. Rinse the bowls, filter parts, and filter cloths thoroughly. Keep filter cloth in cold water when not in use. Twice a week all parts should be soaked in a cleaner. Scrub and rinse well until all coffee deposits are removed.

QUESTIONS:

Certain equipment and supplies are needed in cleaning a coffee urn. In items 1-3, select the appropriate letter indicating the frequency of use for each. The letters should be used more than one time.

EQUIPMENT AND SUPPLIES	FREQUENCY OF USE
1. Cleaner	a. After each use
2. Brushes	b. Twice weekly
3. Hot water	

Write the letter of the phrase that best completes the sentence.

4. New coffee urn bags or cloth filters should be rinsed with water at 140° F. to
   a. kill bacteria.
   b. remove sizing.
   c. make colorfast.

5. After using a cloth or bag filter in the urn,
   a. rinse in hot water.
   b. rinse in strong bleach.
   c. do not rinse.

6. To prevent bag or cloth filter from becoming rancid
   a. hang on line in fresh air.
   b. store in clean container with fresh cold water.
   c. soak in water to which detergent has been added.

7. Urn bags or filters should be replaced
   a. when they become stained.
   b. after each use.
   c. when undesirable odors persist.

8. The urn basket should be cleaned at the end of the day with
   a. an urn cleaner and a stiff brush.
   b. steel wool.
   c. an abrasive cleaner.

9. The vacuum coffee maker should be cleaned after each use with
   a. bleach and hot water.
   b. abrasive cleaner and a brush.
   c. brush and hot water.

10. The vacuum coffee maker needs to be cleaned twice weekly by
   a. soaking all parts in a cleaner.
   b. scrubbing with steel wool.
   c. soaking in a strong bleach.

11. The urn should be filled with
   a. hot tap water.
   b. fresh cold water.
   c. distilled water.

12. A good cup of coffee requires, among other things,
   a. level standard measurements.
   b. heaping measurements.
   c. a person who estimates well.

13. Boiling water should be poured over the coffee grounds with a
   a. quick, up and down motion.
   b. slow, back and forth motion.
   c. steady, circular motion.

14. Coffee in the urn should be held at a temperature of
   a. 212° F.
   b. 185° F.
   c. 140° F.

15. Used coffee grounds should be
   a. dumped immediately after coffee is brewed.
   b. set aside for second use.
   c. left in the urn until it is ready to clean.

16. Drawing or releasing a gallon of the brewed coffee and pouring it back into the urn is done to
   a. cool off the brewed coffee.
   b. improve flavor by adding air.
   c. improve flavor by giving a unified blend.

17. The lower bowl of the vacuum coffee maker is filled to the correct level with
   a. fresh, cold water.
   b. boiling water.
   c. carefully measured coffee grounds.

18. Filter cloths for coffee makers should be
    a. rinsed in detergent and bleach.
    b. rinsed in cold water.
    c. rinsed in strong soda solution.

19. Filter cloths are placed over the filtering device in the
    a. lower bowl of the vacuum coffee maker.
    b. both bowls of the vacuum coffee maker.
    c. top bowl of the vacuum coffee maker.

20. When the top bowl is placed on the lower bowl of the vacuum coffee maker, the water in lower bowl should be
    a. boiling.
    b. hot.
    c. cold.

21. Water from the lower bowl is forced up into the top bowl by
    a. heat.
    b. cold.
    c. gravity.

22. When the water has been in contact with the coffee for the correct length of time, one should
    a. remove the filter.
    b. increase the heat.
    c. reduce the heat.

23. The brewed coffee will return to the lower bowl of the vacuum coffee maker because of the
    a. density of the brew.
    b. vacuum created in the lower bowl.
    c. temperature in the lower bowl.

24. After the coffee returns to the lower bowl, the upper bowl should be
    a. left in place.
    b. removed.
    c. twisted slightly to be sure it fits tightly.

25. The brewed coffee should be set over heat to maintain a temperature of
    a. 140° F.
    b. 160° F.
    c. 185° F.

26. Why is cleanliness of the coffee maker essential?

27. What are the results of underbrewing coffee? Overbrewing coffee?

TEA

Tea is available for quantity preparation in various forms, such as bulk or loose tea leaves, individual tea bags, gallon-size tea bags, and instant tea. Bulk tea must be measured and placed in a cheese cloth or tea ball. The standard portion to use is one ounce of tea to one gallon of boiling water. Gallon-size tea bags may be used in place of bulk tea for quantity preparation. The individual tea bag may be used by the customer to make one or two cups of tea using boiling water. Instant tea is a powdered tea which requires no special preparation and can be made with hot or cold water.

The accepted standards for tea are that it be clear, mild in flavor, and free from tea leaves. Good tea may be attained by using clean equipment and the appropriate amount of tea for the amount of water.

Tea is made by pouring boiling water over tea leaves or bags and allowing it to steep from three to five minutes. Tea that is very strong may be cloudy; however, when cold water is added it becomes clear. Tea should not be boiled since boiling makes it too strong.

A tea-making machine is available now in many food service establishments. This machine combines powdered tea with freshly boiled water and dispenses fresh tea at the touch of a lever.

QUESTIONS:

28. Accepted standards for tea are:
    a.
    b.
    c.

29. How is tea affected by boiling?

30. Describe the procedure for making tea.

Home Economics
Instructional Materials Center
Lubbock, Texas

UNIT VI-3

FOOD PRODUCTION

SUBJECT: Bakery Ingredients

TASKS: Follows standard procedures for preparing a variety of foods

Evaluates quality of food prepared

OBJECTIVE: Be able to recognize functions of bakery ingredients in baked products

REFERENCE: Kotschevar, Lendal H. Quantity Food Production. Berkeley, California: McCutchan Publishing Corporation. 1966, pp. 383-398.

Each ingredient in a baked product has a special role or purpose. For example, flour forms the framework of a baked product, and sugar and shortening help to tenderize the product. Knowing the purpose of each ingredient can help in judging a product. If it seems to be too tough, too much flour may have been used or the amounts of sugar or shortening may have been too small. Detailed information about each of the basic bakery ingredients is given in the above reference.

QUESTIONS:

1. What is the purpose of flour in baked products?

2. Select the flour which has the best baking qualities.
   - a. Oat flour
   - ____b. Wheat flour
   - ____c. Rice flour
   - ____d. Buckwheat flour

3. Which of the following wheats produces a soft, velvety, powdery flour?
   - a. Soft, winter wheat
   - ____b. Hard, spring wheat

4. a. Why is flour made from hard wheat called "strong"?
   b. Why are soft wheat flours called "weak"?

5. What is gluten?

6. Which of the following ingredients interfere with the formation of gluten and thus tenderize the product?
_____a. Fat
_____b. Salt
_____c. Sugar
_____d. Starch

7. What affect would keeping a pie dough cold have on the formation of the gluten?

8. One of Sarah's responsibilities is to receive and store the flour. List three things Sarah should remember about storing flour.
a.
b.
c.

9. Shortenings used in the bakeshops include the following:
a.
b.
c.
d.

10. Why are fats used in bakery goods?

11. What effect does the leavening agent have on the product?

12. Four leavening agents are:
a.
b.
c.
d.

13. What determines the type and quantity of leavening required for a product?
a.
b.
c.
d.
e.
f.

14. Mary was careless in her measurement of baking powder and did not add as much to the muffin batter as was called for in the recipe. What would you expect the muffins to be like?

15. a. What happens when fats, eggs, and sugar are creamed?
b. What qualities does this action produce in the mixture?

16. Which of these methods incorporate air in a product?
_____a. Sifting the flour
_____b. Sifting the sugar
_____c. Beating the batter or dough
_____d. Manipulating a dough

17. Select the bakery goods that depend almost entirely upon steam as the leavening agent.
    - _____a. Biscuits
    - _____b. Popovers
    - _____c. Cream puffs
    - _____d. Griddle cakes
    - _____e. Crackers
    - _____f. Pie crusts
    - _____g. Cookies

18. a. The chemical leavening agents used to leaven bakery products are:
    (1)
    (2)
    (3)
    b. Which of these has limited use?
    c. Which is the most widely used?

True or False:

19. Soft flours are used for pastries, many quick breads, cakes, and cookies.

20. Soft wheat flours are used for yeast breads.

21. The best wheat flours are called patents.

22. The texture of products made from green flour will be tender.

23. Because plastic fats cream well and incorporate air, they increase the volume, texture, and lightness of a product.

24. Excessive fat causes the product to be dry and crumbly.

25. Single acting baking powders evolve gas immediately upon coming in contact with moisture without the application of heat.

26. The quality of the product used for flavoring or seasoning is not of great importance.

UNIT VI-4

FOOD PRODUCTION

SUBJECT: Quick Breads

TASKS: Follows standard procedures for preparing a variety of foods

Evaluates quality of food prepared

OBJECTIVES: Be able to (1) recognize procedures used in preparing quick breads
(2) apply criteria for judging quick breads

REFERENCE: Kotschevar, Lendal H. Quantity Food Production. Berkeley, California: McCutchan Publishing Corporation. 1966, pp. 438-458.

QUESTIONS:

1. What two leavening agents are usually used for leavening quick breads?
   a. Steam
   b. Yeast
   c. Baking powder
   d. Air
   e. Soda

2. What are the advantages of using mixes over preparation from "scratch"?
   a. Mixes save labor and require less skill.
   b. Mixes can be used to produce a wider variety of items.
   c. Mixes may be held in storage up to one year.

3. Which of the following best describes a high quality muffin?
   a. Crust is smooth and low in color.
   b. Crust is crisp, shiny, pebbly, and golden brown.
   c. Muffin is medium in size for its weight.
   d. Top is well rounded and free from knobs.
   e. Interior crumb is moist, light, and tender with no tunnels.

4. Which of the following best describes high quality biscuits?
   a. The crumb pulls away in layers.
   b. The top is smooth and rounded.
   c. The crust is tender and crumbles easily.

5. The characteristics of a good pancake are
    a. clear, even, brown color.
    b. flat in shape.
    c. pitted on the bottom.
    d. moist, slightly heavy texture.
    e. slightly crisp on the outside.

6. What effect does overstirring have on muffins?

7. Josie has been assigned to make muffins.
    a. Give the best mixing technique for her to follow.
        (1)
        (2)
        (3)
    b. Assuming Josie followed the best mixing technique, describe the appearance of the batter.
    c. How should she prepare the muffin tins?
    d. She used a scoop to transfer the batter to the muffin tins. What motion is recommended to prevent toughening the muffins?
    e. What care should be given to the muffin tins after use?
    f. Josie was busy when the muffins came out of the oven and did not have time to take them out of the tins for about 30 minutes. What effect would this have on the muffins?

8. Some food service operations vary their procedures for mixing muffins.
    a. What are these variations?
        (1)
        (2)
    b. If these variations in mixing are used, what change in the ingredients will be required?

9. If muffins are heavy, which of the following may be the causes?
    _____a. Overmixing
    _____b. Mixing too slowly
    _____c. Beating too fast
    _____d. Too much flour
    _____e. Too much liquid
    _____f. Insufficient leavening
    _____g. Too low an oven temperature
    _____h. Oversifting the flour
    _____i. Greased and floured muffin pan

10. The left hand column gives the defects that may occur in poor quality biscuits. The list on the right contains the causes for these defects. Match the causes to the defects. There may be more than one answer for each defect.

DEFECTS

_____ 1. Heavy or compact crumb
_____ 2. Pale crust
_____ 3. Poor volume
_____ 4. Light, but not flaky
_____ 5. Poor shape

CAUSES

a. Oven is not hot enough
b. Insufficient baking powder
c. Uneven rolling
d. Insufficient shortening
e. Shortening too finely cut into flour
f. Careless cutting or placing in pan
g. Too much liquid
h. Too much flour
i. Overmixed or overkneaded dough
j. Baked in too deep a pan
k. Insufficient kneading

11. What is the usual mixing technique for griddlecakes and waffles?

12. How many ounces of batter will produce a small griddlecake, and how many ounces will produce a large griddlecake?

13. When baking griddlecakes,
    a. what happens if the heat is too low?
    b. what happens if the heat is too high?

14. Which of the following is the leavening agent used in popovers or eclairs?
    a. Baking powder
    b. Steam
    c. Air
    d. Soda

15. A rapid, cold shock upon removal from the oven will cause popovers to collapse. How can this be prevented?

True or False:

16. Quick breads belong to the family of batters.

17. The flavor of a high quality muffin is delicate and very sweet.

18. A high quality biscuit is well shaped and regular, with straight, even sides and a level top.

19. A high quality waffle has a light, even, brown color; a cream-colored crumb; and an open interior.

20. The quality of muffins will not be changed by allowing the mixed batter to stand in the pan before baking.

21. Undermixing and underkneading will toughen biscuits.

22. The density of the batter for waffles will be between griddlecakes and muffins.

23. Griddlecakes are baked on a well-greased griddle.

24. Waffle batter should be spread to the edge of the waffle iron.

25. Crumpets and English muffins are usually yeast leavened.

ASSIGNMENT:

If you are assigned to prepare quick breads, prepare a score card you can use to judge the products you make. If improvement needs to be made, try to figure out what caused the problem. Show your teacher the score card and discuss the quality of the products you prepared with her.

UNIT VI-5

FOOD PRODUCTION

SUBJECT: Yeast Breads

TASKS: Follows standard procedures for preparing a variety of foods

Evaluates quality of food prepared

OBJECTIVES: Be able to (1) describe procedures for preparing yeast breads
(2) select correct baking temperatures for optimum quality
(3) recognize standards for quality yeast breads

REFERENCE: Kotschevar, Lendal H. Quantity Food Production. Berkeley, California: McCutchan Publishing Corporation. 1966, pp. 399-438.

QUESTIONS:

1. Betty has been assigned the task of baking yeast breads. What factors should she consider when evaluating the quality of the yeast breads she makes?

a.
b.
c.
d.
e.
f.
g.
h.
i.
j.

2. Which of the following are desirable characteristics of the crust of yeast bread?

_____a. Tender
_____b. Dark brown
_____c. Moderate thickness
_____d. Uniformity
_____e. A ragged, open break

3. The internal appearance of a loaf of bread or rolls is judged on the basis of certain qualities. List these qualities.

a.
b.
c.
d.

4. Yeast doughs are made from which of the following ingredients?

____a. Flour
____b. Eggs
____c. Fat
____d. Liquid
____e. Baking powder
____f. Yeast
____g. Salt

5. Two terms used for each of the two basic yeast doughs are:

a.
b.

6. What are the functions of salt in yeast breads?

a.
b.
c.
d.
e.

7. a. What ingredient furnishes food for the growth of the yeast?
   b. List two other contributions of this ingredient to the quality of the product.

8. What is yeast?

9. Rearrange these steps by numbering them in the order they would be used for making yeast bread by the straight dough method.

____ Baking
____ Punching
____ Make-up
____ Cooling
____ Weighing and mixing
____ Storing
____ Fermentation
____ Benching and resting
____ Proofing

10. Match the name of the dough with the correct description:

a. Straight   b. Sponge   c. No-time

____1. Is mixed at high speed
____2. Is mixed with a horizontal mixer
____3. Does not compare in quality to other types
____4. Combines 60% of the flour, all the liquid, and yeast to form a thick batter during mixing process
____5. Has noticeable firmness when pressed with the hand
____6. Is used most frequently in quantity food service
____7. Comes from the mixer at 90° F. and is held at this temperature for fermentation
____8. Has many small bubbles when overmixed
____9. Is mixed by hand or in a vertical mixer
____10. Has maximum amounts of conditioner, sugar, and yeast

11. In what kind of situation is the no-time dough method used?

12. In making a straight dough, when is the shortening added if a liquid shortening is used?

13. Describe the changes that occur in the dough during fermentation.
    a.
    b.
    c.

14. What is meant by "punching" the dough?

15. Why is the dough taken to the work bench and allowed to rest?

16. Describe the processes involved in the "make-up" of
    a. rolls
    b. loaf bread

17. Shortening is rolled into a dough by rolling the dough out about three-fourths of an inch to an inch thick and about three times longer than it is wide. Margarine, butter, or shortening is then dotted over two-thirds of the surface. Which of the following processes will then be carried out?
    _____a. The remaining third is cut and dotted with butter.
    _____b. The uncovered third is folded over half of the uncovered part.
    _____c. The cut third is placed over remaining covered third, giving three layers of dough.
    _____d. The remaining covered third is then folded over the top, giving three layers of dough and two layers of shortening.

18. Baking should proceed immediately after proof. Which of the following characteristics are a result of over-proofing?
    _____a. Closed grain
    _____b. Open grain
    _____c. Brown color to the crumb
    _____d. Gray color to the crumb
    _____e. Loss of flavor
    _____f. Flavor improvement

19. Multiple Choice: Select the one answer that could cause the particular failure.

    a. Spotted crust
        1. Weak flour
        2. Excess dusting flour
        3. Too hot an oven

    b. Dark crust
        1. Baked too long
        2. Undermixing
        3. Too much yeast

c. Too coarse or open grain
   1. Old flour
   2. Excess salt
   3. Hard water

d. Poor texture
   1. High oven temperature
   2. Lack of shortening
   3. Overmixing

e. Tough crust
   1. Too little shortening
   2. Too much flour
   3. Cold oven

f. Poor volume
   1. Overmixing
   2. Too cool an oven
   3. Too much flour

20. a. In what kind of containers should bread be stored?
    b. What kind of bread should be baked daily?

21. List the characteristics of stale bread.
    a.
    b.
    c.

True or False:

22. Rich yeast doughs contain sugar, eggs, and flavorings.

23. Milk improves the flavor but depresses the volume of bread.

24. Milk is usually added to hard-crust breads.

25. Compressed and active dry yeast are the most commonly used yeasts.

26. Good punching remixes ingredients so the yeast obtains new food and the gluten is relaxed.

27. Rounding is a process by which a loaf is shaped into a smooth, round ball.

28. After baking, loaves, large rolls, and rolls that touch in the pan are dumped from their pans into boxes.

ASSIGNMENT:

If you are assigned to prepare yeast breads, prepare a score card you can use to judge the breads you make. If improvement needs to be made, try to figure out what caused the problem. Show your teacher the score card and discuss the quality of the breads you make with her.

Home Economics
Instructional Materials Center
Lubbock, Texas

UNIT VI-6

FOOD PRODUCTION

SUBJECT: Pastries

TASKS: Follows standard procedures for preparing a variety of foods

Evaluates quality of food prepared

OBJECTIVES: Be able to (1) give procedures for preparing pastries
(2) select correct baking temperatures for optimum quality
(3) recognize standards for quality pastries

REFERENCE: Kotschevar, Lendal H. Quantity Food Production. Berkeley, California: McCutchan Publishing Corporation. 1966, pp. 533-556.

QUESTIONS:

1. Pies and pie-like products may be costly from the standpoint of the labor involved. Give three suggestions that would cut down on the cost of production.

2. List two kinds of pastries closely related to pies.

3. List some variations in types of pie crust.
   a.
   b.
   c.
   d.

4. Which of the characteristics listed below describe a standard pie crust?
   _____a. Moist
   _____b. Crisp
   _____c. Tender
   _____d. Crumbly
   _____e. Short, easily broken

5. Jan's supervisor said the pie crust she made was of high quality. Describe the appearance of a quality pie crust.

6. Pie fillings may vary in consistency and type. One of these variations is the starch-thickened filling. Give the characteristics of a quality starch-thickened filling.

7. Match the ingredients used in plain pastry to the function each performs.

FUNCTIONS	INGREDIENTS
_____a. Lubricates flour	1. Flour
_____b. Strengthens gluten	2. Salt
_____c. Provides steam	3. Shortening
_____d. Gives flavor	4. Water
_____e. Provides gluten	
_____f. Makes soft, pliable dough	
_____g. Provides tenderness	

8. What ingredient is sometimes used to improve color and flavor, but reduces the crispness of the crust?

9. The flour most frequently used for pie dough is _______________.

10. For proper crust tenderness, a shortening with good tenderizing power is required. Name a shortening that gives tenderness and flavor and has plasticity.

11. There are specific requirements essential to the production of good pies. What are these requirements?
   a.
   b.
   c.

12. a. What is the best temperature for mixing shortenings into the flour for pie doughs?
   b. What happens when the shortening is too cold? too warm?

13. Match the types of crust with their characteristics.

CHARACTERISTICS	TYPE OF CRUST
_____a. A crust that soaks very little	1. Mealy crust
_____b. 75-100% shortening	2. Semi-flaky crust
_____c. Best suited for all purposes	3. Flaky crust
_____d. Good for tarts and top crusts	
_____e. 50-60% shortening	
_____f. Good for undercrust	
_____g. 60-75% shortening	

14. What will result from the addition of too much flour during rolling?

15. Describe a rolling procedure which will keep waste and shrinkage low.

16. After the crust is in the desired shape, how is it placed in the pan?

17. Define docking. Why is it done?

18. What can be done to single crust pie shells instead of docking?

19. Double crust pies have a tendency to boil-out in the oven. Boil-out means the filling will bubble while cooking and spill into the oven. How can this be prevented?

20. Which ingredients will give extra color to the crusts when applied before baking?
_____a. Butter
_____b. Water
_____c. Milk
_____d. Cream
_____e. Eggs
_____f. Salt
_____g. Eggs and milk

21. If special tartlet tins are not available, what may be used to make individual shells?

22. Give the baking temperature and time for
a. Single crust pies
b. Double crust pies
c. Baker's straight baking temperature for double crust pies

23. Toppings for single crust pies also vary. Name 5 toppings.

24. A streussel-like topping may also be baked on top instead of a top crust. What is this top crust called?

25. List the four factors affecting quality of fruit pie fillings.

26. What two ingredients are commonly used as thickeners?

27. How should flour or cornstarch be added to the fruit liquid when making pie filling?

28. What is a parfait pie filling?

29. In many food service operations, single crust cream pies are not filled until just before use. Explain why this is done.

True or False:

30. The surface color of a pie crust should be golden, darkening to a golden brown at the edge.

31. The amount of shortening used is an important factor in achieving tenderness.

32. A warm dough rolls and handles easier than a cool one.

33. Unbaked pie doughs may be stored about a week under refrigeration.

34. A graham cracker crust may be either baked or refrigerated before use.

35. Regular crusts are usually rolled about 1/2 inch thick.

36. The rolling pin and the top of the dough should be kept lightly dusted with flour.

37. Overbrowning of pie crusts will result if the heat is too high.

38. Low quality fruit may be used in pie fillings to reduce costs.

ASSIGNMENT:

If you are assigned to prepare pastries, prepare a score card you can use to judge the pies you make. If improvement needs to be made, try to figure out what caused the problem. Show your teacher the score card and discuss the quality of the pies you make with her.

Home Economics
Instructional Materials Center
Lubbock, Texas

UNIT VI-7

FOOD PRODUCTION

SUBJECT: Desserts

TASKS: Follows standard procedures for preparing a variety of foods

Evaluates quality of food prepared

OBJECTIVES: Be able to (1) describe procedures for making simple desserts
(2) recognize characteristics of standard products

REFERENCES: Required: Kotschevar, Lendal H. Quantity Food Production. Berkeley, California: McCutchan Publishing Corporation. 1966, pp. 557-606.

Supplementary: Pollard, Belle. Experiences with Foods. Boston, Massachusetts: Ginn and Company. 1960, pp. 166-170; 259-260; 257-259.

QUESTIONS:

1. a. What is proper baking temperature for a custard?
   b. What is the result if baking temperature is too low?
   c. Why is the baking dish set in pans containing water during baking?
   d. How does overcooking affect the custard?
   e. What is the test for the doneness of a baked custard?

2. The two types of puddings are:
   a.
   b.

3. Describe how each of the following are made:
   a. Fruit rolls
   b. Roly-poly
   c. Fruit dumplings

4. a. The types of meringues are:
      (1)
      (2)
   b. Meringues are used for:
      (1)
      (2)

5. Completion:

   a. The best time to prepare a soft meringue is ________________.
   b. Meringue should be put on a ____________ (temperature) filling, not a ________________ one.
   c. In quantity cooking, bake meringue at a ___________ temperature for a relatively ________________ time.
   d. When frozen egg whites are used they should not be thawed above ______________ degrees to avoid food poisoning.
   e. The type of sugar used in meringues should be ___________ to prevent graininess.
   f. Acid and ____________ should be added at the beginning of the process for meringue.
   g. The acid used may be cream of tartar, _____ __________, or __________.
   h. The sugar should be added in _____________ amounts, beating well to blend, and _____________ it.

6. What is the result when the egg whites for the meringue are underbeaten before adding the sugar?

7. a. Define the term leakage as related to meringues.
   b. What are four causes of leakage?

8. About four tablets of _________ dissolved in a small amount of _________ water will set one gallon of milk.

9. Stirring and __________ will break the curd formed by rennet.

10. Ice cream is a frozen mixture of milk, _______, ________, and _____.

11. What are the factors which determine the texture of a frozen dessert?
    a.
    b.
    c.
    d.

12. For a smooth texture, the crystals in a frozen dessert should be _____.

13. Ice cream should have an overrun of _________% to _________%.

14. _____________ __________________ causes ice cream to be hard.

15. It is easy to destroy the quality of frozen desserts by _____ _______ or by keeping the dessert at the wrong _______________.

16. To make ice cream easier to serve, it should be held at __________ to _____________ degrees. For longer periods of storage, a temperature of ______________ degrees should be maintained.

17. The quality of frozen desserts is judged on the basis of
    a.
    b.
    c.

Multiple Choice:

18. Dessert crêpes are made from thin batters that resemble those for
    a. muffins.
    b. omelets.
    c. cakes.
    d. regular pancakes.

19. Batters for crêpes do not contain
    a. leavening.
    b. flour.
    c. salt.
    d. eggs.

20. To cook the crêpes, pour a _________ amount of batter into a hot pan in which butter has been delicately browned.
    a. maximum
    b. medium
    c. minimum

21. What are fritters?

22. a. The kinds of doughnuts are cake, ___________, and _____________.
    b. What kind of dough is used to make each?
    c. Yeast doughs may also be made into other deep fried products, such as Long Johns and _____________.

23. For what three reasons do institutions serve puddings frequently?

24. The ingredient that is included in a cream pudding but not in blanc mange is ___________________.

25. The following steps are used to prepare cream puddings. By numbering from 1-9, arrange them in the order in which they should be done.
    a. _____ Blend sugar, cornstarch, and salt.
    b. _____ Add butter and flavorings.
    c. _____ Heat milk.
    d. _____ Combine milk and cornstarch mixtures, stirring well and rapidly.
    e. _____ Add eggs slowly to the hot cornstarch milk mixture, stirring rapidly and constantly.
    f. _____ Add small amount of starch-thickened mixture to eggs.
    g. _____ Cook for 10 minutes or until temperature is above 200° F.
    h. _____ Remove form heat.
    i. _____ Cook to 195° F.

True or False:

26. _____ Shortcakes are biscuit-type fruit desserts.

27. _____ In making shortcakes, one layer of dough about 1/2 inch thick is used.

28. _____ The cobbler and Dutch cake are forms of fruit desserts.

29. _____ The Italian meringue is a boiled frosting.

30. _____ The Swiss meringue is beaten over boiling water and finished in a mixer by whipping at medium or high speed until stiff.

31. _____ Seven-minute frosting may be used as a topping in the same way meringue is used.

32. _____ Dried egg whites or meringue powders are never successful when used for meringues.

33. _____ If the storage temperature is too high, crystalline growth will decrease in frozen desserts.

34. _____ Frozen desserts easily absorb flavors from other foods.

ASK YOUR TEACHER FOR PART I OF THE TEST FOR UNIT VI.

UNIT VI-8

FOOD PRODUCTION

SUBJECT: Salads

TASKS: Follows standard procedures for preparing a variety of foods

Evaluates quality of food prepared

OBJECTIVES: Be able to (1) list different types of salads
(2) describe procedures for preparing salads which retain nutrients and contribute to appearance

REFERENCE: Kotschevar, L. H. Quantity Food Production. Berkeley, California: McCutchan Publishing Corporation. 1966, pp. 126-146.

SALADS

Salads are important in meal planning because they add variety, crispness, color, and refreshing flavors to meals. Many different fruits and vegetables are used in salads to provide an excellent source of minerals and vitamins.

An attractive salad can be made by careful handling of ingredients, using creativity in arrangement, and selecting suitable combinations of color, flavor, and texture. Bright colors of fruits and vegetables add to the eye-appeal of salads. A variation of textures may be achieved through the use of soft and crisp foods. The dressing used on the salad should complement the flavor of the body of the salad, but it should not overpower it.

Ingredients used in salads must be clean, fresh, tender, crisp, and chilled. A thorough cleansing of all fresh fruits and vegetables is a prime factor in salad preparation.

Salad preparation should be completed in a minimum amount of time to retain nutrients, flavor, and appearance. Salads should be stored at temperatures which will keep them at the peak of quality until served. If allowed to stand unrefrigerated for more than 20 minutes, they are likely to begin to wilt.

Below are some suggestions for preparing fresh fruits for salads:

Apples: Dice apples by cutting into rings and using a sectional cutter.

To prevent discoloration, drop pieces into salad dressing, lemon, pineapple, or other acid fruit juices. Drain fruit pieces before using in the salad, if fruit juice was used. If apples are to be used in sections, cut into uniform pieces keeping the widest section not more than 1/2 inch thick. After the core has been removed from each section, dip into fruit juice to prevent discoloration. Scoring or cutting the slices in several places will make them easier to cut when served.

Bananas: Dip bananas into acid fruit juice or salad dressing to prevent discoloration.

Grapefruit: Pare and section grapefruit by:

1. cutting off a thick layer of skin from top and bottom.
2. placing grapefruit on cutting board.
3. starting at the top of the grapefruit and cutting toward the board with a downward stroke to remove all the white membrane.
4. continuing to turn grapefruit with the left hand and cutting until all of the skin is removed.
5. removing sections with a knife--cut along membrane of one section to the center of the fruit, turn the knife, and cut to outside of fruit.

Peaches: Skins may be removed by dropping peaches into boiling water for a few minutes. Skins should be removed only a short time before using the fruit. Discoloration may be prevented by dropping slices into acid fruit juice.

Salads are combinations of various ingredients, served with or without a dressing. They are used as appetizers, entrees, accompaniments, side dishes, or desserts.

An appetizer salad is usually light and tangy. Example: Salad greens with French dressing

An entree salad is heavier than an appetizer salad; it is more satisfying, and often includes a protein food. Example: Tomato stuffed with tuna

A side dish salad is light and varied. It is usually served in smaller portions. Example: Carrot-raisin salad

A dessert salad may be light or heavy and nearly always contains fruit. Example: Frozen fruit salad

QUESTIONS:

1. Connie's supervisor told her she had done a good job of arranging the salads on the plates. Which of these things did she do?
    a. Placed the lettuce up to the edge of the plate
    b. Cut ingredients into bite size pieces
    c. Arranged ingredients neatly

2. Give two reasons why salads are important in meal planning.

Multiple choice:

_____ 3. A salad may be used as
   a. an appetizer.
   b. a side dish.
   c. a dessert.
   d. a main dish.
   e. all of these.

_____ 4. An example of a salad which may be used as an entree is
   a. potato salad.
   b. coleslaw.
   c. chicken salad.
   d. waldorf salad.
   e. tossed salad.

_____ 5. A dessert salad almost always contains
   a. greens.
   b. fruit.
   c. dressing.
   d. vegetables.
   e. nuts.

_____ 6. A salad will be more attractive and appealing if
   a. colors are bright.
   b. texture of all ingredients is the same.
   c. ingredients are minced.
   d. the edge of the salad is 1-1/2 inches from the edge of the plate.
   e. ingredients are cut in the same shapes.

_____ 7. Which of these salads would be a good example of a side-dish or accompaniment?
   a. Frozen fruit salad
   b. Tuna salad
   c. Carrot-raisin salad
   d. Egg salad
   e. Chicken salad

_____ 8. The only part of the salad which should not be omitted is
   a. garnish.
   b. underliner.
   c. dressing.
   d. body.

In items 9-14, match the dressings and their characteristics:

DRESSINGS

A. Cooked Dressing
B. French Dressing
C. Mayonnaise

CHARACTERISTICS

_____ 9. A dressing that separates on standing
_____ 10. A permanent emulsion
_____ 11. A temporary emulsion
_____ 12. A dressing made without oil
_____ 13. A dressing that needs shaking before using
_____ 14. A good dressing for "weight watchers"

15. List at least three fruits which need to be placed in acid fruit juices to prevent discoloration.

16. What must be done to plain gelatin before it is added to the salad mixture?

17. What can be done to help speed the process of setting gelatin salads?

18. When should ingredients, such as fruits or vegetables, be added to gelatin salads? Why?

19. What can be done to prevent tossed salads from drying out between preparation and serving time?

20. Should the oil or vinegar be added first when preparing a tossed salad with an oil-vinegar dressing?

ASSIGNMENT:

Choose one of the salads served at your training station and do the following:

(1) List the equipment required for preparation of the salad.

(2) List the necessary ingredients.

(3) Draw the work center and explain how the salads will be assembled in a quick and efficient manner.

Turn this assignment in to your teacher.

UNIT VI-9

FOOD PRODUCTION

SUBJECT: Sandwiches

TASKS: Follows standard procedures for preparing a variety of foods

Evaluates quality of food prepared

OBJECTIVES: Be able to (1) describe procedures for making sandwiches
(2) recognize characteristics of quality products

REFERENCE: Kotschevar, Lendal H. *Quantity Food Production*. Berkeley, California: McCutchan Publishing Corporation. 1966, pp. 108-125.

QUESTIONS:

Connie has just been employed at a food service establishment. Her supervisor has assigned her to the sandwich making area. Let's follow her through her first day's activities and see if you can answer her questions.

1. Before she started work her supervisor gave her some hints about the quality they expected in sandwiches. What would she have told her about the following?
    a. What should be included in sandwiches with soft fillings?
    b. How much of the total weight of the sandwich should be filling?
    c. What could be used as a guide in determining the softness of bread to use?
    d. What suggestion might her supervisor have given her about fillings in relation to the edge of the sandwich?

2. When Connie's supervisor told her she would be responsible for storing the bread brought to her work area, the following questions came to her mind. How would you answer Connie's questions?
    a. How should soft-crusted breads be stored?
    b. How should hard-crusted breads be stored?
    c. What effect does refrigeration have on bread?
    d. What effect does freezing have on bread?
    e. Should she use the bread left over from the previous day before opening the new loaves of bread? If not, what should be done with it?

3. The supervisor told Connie there were two things that were most likely to cause sandwiches to be soaked or soggy. What are these two practices?

4. As Connie observed her co-worker spreading the filling on the bread, she noticed that she used a smooth rhythmic motion that looked like an ______________.

5. What kind of bread should be used for
   a. canapes?
   b. hot sandwiches?
   c. grilled sandwiches?

6. What hint did Connie's supervisor give her about grilling sandwiches that would cause them to brown more rapidly and evenly?

7. After the sandwiches were made, Connie had the following questions about storing them:

   a. Where should sandwiches with perishable fillings be stored until serving time?
   b. How high should unwrapped sandwiches be stacked? Wrapped sandwiches?
   c. What should be used to cover unwrapped sandwiches that need to stand for a short time before serving?

8. Connie's supervisor told her that it was very important that she use the amount of spread and filling specified by their standards. If more than the specified amount was used, there would not be enough ingredients for the required number of sandwiches. If not enough was used, the customer would be dissatisfied. Suppose Connie used 3-1/2 T. of a spread-type filling per sandwich instead of the 2-1/2 T. specified. Instead of being able to make 102 sandwiches per gallon of filling, she would be able to make only 73. If these sandwiches sold for 50¢, how much would the business have lost?

9. Which of these fillings would not freeze well?
   a. Jelly
   b. Peanut butter
   c. Dried beef
   d. Cheese spreads
   e. Roast beef
   f. Egg salad containing mayonnaise

ASSIGNMENT:

If you work in the sandwich area, write out the procedure you use. What can you do to improve your work methods? Refer to page 111 and the illustrations on page 112 in Kotschevar's Quantity Food Production for suggestions. Time yourself with the method you now use and then try the new plan you work out. Report the results of your experiment to your teacher.

UNIT VI-10

FOOD PRODUCTION

SUBJECT: Vegetable Cookery

TASKS: Follows standard procedures for preparing a variety of foods

Evaluates quality of food prepared

OBJECTIVES: Be able to (1) recognize the four classifications of vegetables
(2) describe the correct procedures for vegetable cookery
(3) recognize criteria for evaluating cooked vegetables

REFERENCE: Kotschevar, Lendal H. Quantity Food Production. Berkeley, California: McCutchan Publishing Corporation. 1966, pp. 264-302.

QUESTIONS:

1. Jill is assigned to the vegetable area. She asked her supervisor how she would know if the vegetables were well-prepared. What would the supervisor have told her about each of the following?
   a. Flavor
   b. Texture of vegetables with high moisture content
   c. Texture of starchy vegetables
   d. Form

2. Match the vegetables on the right with the types of vegetables listed on the left.

TYPES OF VEGETABLES

_____ a. High moisture-mild flavor
_____ b. High moisture-strong flavor
_____ c. Moist, starchy
_____ d. Dry, starchy

VEGETABLES

1. Dried beans
2. Cabbage
3. Potatoes
4. Green peas
5. Turnips
6. Rice

3. What is the main concern when cooking
   a. high-moisture, mild-flavor vegetables?
   b. high-moisture, strong-flavor vegetables?
   c. moist, starchy vegetables?
   d. dry, starchy vegetables?

4. Which would you expect to take longer to cook: young vegetables or more mature vegetables? A root vegetable such as beets or a leaf vegetable such as spinach? Why?

5. Jane works in an area where the water is hard. Will she probably have to lengthen or shorten the time for cooking vegetables? Why?

6. What can be added to the water to help hold the flavors of vegetables which tend to vaporize during cooking?

7. Virginia did not reduce the heat after the vegetables she was cooking came to a boil. What effect would this have on the vegetables?

8. The color or pigment in vegetables is affected by various cooking procedures.
   a. What might happen if beets were cooked in an iron pot? Why?
   b. Are carrots or sweet potatoes (carotene pigment) likely to lose their color during cooking? Why or why not?
   c. Why do green vegetables lose some of their color during cooking?

9. Why might deep peeling or soaking after peeling cause a loss of vitamins?

10. When cleaning vegetables by soaking, the process will be hastened by using
    a. 1 cup sugar in 2 gallons of water.
    b. 1 tablespoon of detergent in 1 gallon of water.
    c. 1 tablespoon of salt in 1 gallon of water.

11. Vegetables that have lost freshness may be restored by
    a. placing them in ice water.
    b. soaking them in salt water.
    c. refrigerating them for one hour.

12. Vegetables that are not suitable for service due to poor appearance should be
    a. thrown out.
    b. used in soups or stews.
    c. frozen for later use.

13. To serve quality potatoes, it is necessary to purchase the right variety for each method of preparation. Which would be better, potatoes high in starch or moist and waxy, for each of the following methods of preparation?
    a. Baking--
    b. Salads--
    c. Hash brown--
    d. Creamed--
    e. Boiled--
    f. Steamed--

14. Streaks in French fried potatoes may be the result of using potatoes
    a. high in sugar.
    b. high in starch.
    c. low in sugar.

15. A thorough cleaning of vegetables, such as potatoes, would probably be achieved by
    a. soaking in hot water.
    b. spraying water over the vegetables.
    c. scrubbing vigorously.

16. Dried vegetables should be soaked before cooking in order to
    a. increase their volume.
    b. decrease their volume.
    c. increase the cooking time.

17. Betty was assigned to cook the green beans. She covered the beans with cold water and placed them over high heat. She put a lid on the pan until the beans came to a boil. She then removed the lid and cooked the beans until they were done. What three mistakes did she make?

18. When cooking strong-flavored vegetables, it is recommended that they be
    a. cooked (covered, uncovered) ________________.
    b. cut into (small, large) ________________ pieces.
    c. cooked in (large, small) ______________ amounts of water.
    d. (young, old) ________________ vegetables.

19. What is the best method for cooking moist, starchy vegetables?

20. What temperature should the water be when adding macaroni products and rice?

21. What is the test for doneness of rice?

22. What needs to be done to potatoes before they are deep-fried?

UNIT VI-11

FOOD PRODUCTION

SUBJECT: Meats and Entreé Foods

TASKS: Follows standard procedures for preparing a variety of foods

Evaluates quality of food prepared

OBJECTIVES: Be able to (1) describe procedures for preparing meats
(2) list temperatures for meat cookery
(3) list criteria for judging meat cookery

REFERENCE: Kotschevar, Lendal H. Quantity Food Production. Berkeley, California: McCutchan Publishing Corporation. 1966, pp. 306-339.

QUESTIONS:

1. Tenderness in meat is affected by the amount and kind of connective tissue present. What are the two types of connective tissue? How is each affected by cooking?

2. What factor has the most influence on the amount of shrinkage which occurs when cooking meat?

3. What kind of temperatures are recommended for meat cookery? Why?

4. Joe was assigned to cook steaks. A primary factor in customer satisfaction is receiving a steak cooked to the degree requested. Joe learned to identify the stage of doneness according to the appearance of the meat. Which stages of doneness are described below?

    a. Exterior is well browned, color of interior is modified rose, pink juices can be seen in small amounts, has definite resistance when pressed

    b. Brown outer surface, raw portion in center, plump appearance, red juices, feels soft when pressed

    c. No pink color, some juiciness, juices clear or gray, firm to the touch

    d. Browned, dry surface, little or no juice, gray interior, shrunken in appearance, feels hard when pressed

5. What temperature should the following meats reach during cooking?
   a. Beef--well done
   b. Fresh pork
   c. Lamb--medium
   d. Beef--rare
   e. Cured pork

6. Sue was told to cook a beef roast to the medium stage of doneness. What should the internal temperature of the roast be when it is removed from the oven? Why?

7. In each of the pairs below, which would take longer to cook?
   a. A flat roast or a solid roast
   b. A roast with the bone removed or a roast with the bone
   c. A roast with a great deal of fat or a small amount of fat

8. Give at least three characteristics of meats that have been well prepared.
   a.
   b.
   c.

9. What is the most important factor in choosing the method to use when cooking a particular piece of meat?

10. Dave was given the task of cleaning the griddle at the end of the day. What procedure should he use?

11. How can temperatures for broiling be estimated?

12. Joe noticed that the edges of the steaks he was broiling were curling up. What had he forgotten to do?

13. When broiling, how many times are small or medium cuts of meat turned?

14. When pan-broiling, the fat is ____________________.

15. a. How should a roast be placed in the pan?
    b. What procedure should be followed when turning a roast?
    c. Where should the thermometer be inserted in the roast?

16. What is sautéing?

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Instructional Materials Center
Lubbock, Texas

UNIT VI-12

FOOD PRODUCTION

SUBJECT: Deep-Frying

TASKS: Follows standard procedures for preparing a variety of foods

Evaluates quality of food prepared

OBJECTIVES: Be able to (1) describe procedures for deep-frying foods
(2) list criteria for judging deep-fried products

REFERENCE: Kotschevar, Lendal H. Quantity Food Production. Berkeley, California: McCutchan Publishing Corporation. 1966, pp. 340-355.

QUESTIONS:

1. As one of the employees removed the potatoes from the fryer, she salted them while the basket was still over the fat. Why would this practice not be recommended?

2. Factors that cause frying fats to break down are
   a. (high, low) ______________ cooking temperatures.
   b. use of a (shallow, deep) ____________ frying pan.
   c. ______________ particles in the fat.

3. a. To what temperature should fat be heated for frying?
   b. What happens when it reaches too high a temperature?

4. Some pieces of deep-fried chicken were light in color, greasy, and soggy. What would cause this?

5. Deep-fried foods that are too brown on the outside and underdone on the inside are the result of ______________________________________.

6. Complete the statements to give some hints for deep-frying which Sue learned as she watched the cook.
   a. Select pieces of food that are the same size so they will
   ______________________________________.
   b. Avoid filling the basket too full because this ______________
   ______________________________________.

c. Place breaded foods in the basket so they ____________________
____.

d. Allow foods to reach ______________ temperature before frying to shorten cooking time.

e. Lower the basket into the fat ____________________________.

f. Shake the basket of food occasionally to prevent ____________
____.

g. After use, remove food particles from fat by ________________
____.

h. To avoid fat breakdown and off-flavors in foods, frying equipment must be ____.

7. In what order are foods dipped in these ingredients when they are being breaded--crumbs, flour, and liquid?

8. How can a bread-cube test be used to check the temperature of the fat for deep-frying?

9. What precaution needs to be taken before frying foods that have been breaded or dipped in batter?

10. Some of the problems which occur when deep-frying are listed in the column on the left. Select from the column on the right the condition which may be causing the problem. There may be more than one cause for the problem.

PROBLEMS	CAUSES
_____ a. Fat bubbles over	1. Frying temperature too low
_____ b. Soggy	2. Foods not well-drained
_____ c. Smoking of fat	3. Frying temperature too high
_____ d. Excessive foaming of fat	4. Fat not strained
	5. Too much food in kettle
	6. Foods too cold when added to batter

UNIT VI-13

FOOD PRODUCTION

SUBJECT: Convenience Foods

TASK: Follows standard procedures for preparing a variety of foods

OBJECTIVE: Be able to (1) identify convenience foods
(2) recognize reasons for using convenience foods

In the past few years some exciting changes have been occurring in the food service industry. These changes have come about because of a combination of factors including:

1. a shortage of trained personnel estimated to be 6 per cent below optimum levels with predictions that this shortage will increase to 9 per cent in a few years.
2. the public's increased "eating out" trends and their desire for new dining experiences.
3. technological advances in equipment and processing.

The combination of the above factors has led the food service industry to seek a solution to some of its problems through the use of convenience foods.

A convenience food may be defined as one that requires little preparation at serving time because it has been pre-prepared by someone else. In a food service establishment using convenience foods, the preparation consists of the thawing, heating, and serving of foods. The pre-preparation, including the cooking, has usually been done at the processing plant prior to the freezing or canning of the food.

Convenience foods are not new, in fact some are quite old. Sausage, gelatins, and packaged pudding mixes are among the oldest convenience foods. Recently some innovations have made gelatins and puddings even more convenient. Gelatin has traditionally been prepared from a base of animal protein, but the new gelatins are made with a base called carrageenan. Carrageenan is a vegetable protein derived from marine plant life. The gelatins made from this new base product set in 15 minutes without refrigeration. Other advantages are that molds will stand at room temperature without becoming rubbery or melting; fruits and vegetables may be added within a matter of minutes; and a molded gelatin will "pop" right out of the mold without using hot water. Additional convenience in puddings was achieved through canning the prepared puddings. These puddings are shelf-stable, require no preparation, and only need to be spooned into dessert dishes for serving.

The labor shortage has created a demand for more and more convenience foods in order to meet the demands of a steadily increasing business. Although the cost of using convenience foods is usually higher than the cost of regularly prepared foods, the labor cost is lower, sometimes as much as 20-25 per cent; space requirements for food preparation may be reduced from 5-20 per cent; and the equipment needs may be as much as 20 per cent less. The amount of the reductions more than offsets the higher cost of using the convenience foods. Further savings occur because waste is almost entirely eliminated.

The quality of convenience foods may actually be higher than that of regularly prepared foods. The convenience foods are processed when the nutritive value is at its peak. They are processed rapidly to retain the nutrients and are either canned or quick frozen immediately, whereas the fresh foods may incur a high loss of nutritive value as they pass through the various steps in marketing. The convenience foods also have a greater consistency of quality due to the rigid quality control standards which are employed during the processing period.

Included in the new equipment which speeds the preparation of convenience foods are:

1. micro-wave or electronic ovens which cook in minutes the same food that requires hours in a regular oven.

2. re-con ovens--combination freezers and ovens which are capable of storing up to 360 pounds of frozen foods at 0 degrees and then bringing the temperature up to 165 degrees, which is serving temperature, in 55 minutes.

Today a variety of convenience foods are available including approximately 170 different entrees; almost every kind of soup and sauce; many vegetables, fruits, and salads; and a wide assortment of dessert items. The menu selections are limited only by the imaginations of those in charge. For instance the menu selection for entrees in a restaurant could look like this:

Mushroom Gravy and Sirloin Tips
Meat Loaf with Tomato Sauce
Ham Steak with Pineapple Sauce
Chicken in Curry Sauce
Roast Boned Duckling a l'Orange
Lobster in Hollandaise Sauce
Shrimp Creole with Buttered Parsleyed Rice

One convenience product that has been accepted by a majority of food service establishments are instant potatoes. They come in flakes or granules and have a natural flavor, a white color, and the mealy (not sticky) texture of a perfectly prepared product. In addition to saving time and energy during preparation, instant potatoes offer the advantage of requiring less storage space. Three cases of #10 cans are equal to about 900 pounds of raw potatoes and require only one eighth of the storage space. Inventory is also simplified by having the potatoes in easy-to-handle cases and boxes. The instant potatoes can be used as ingredients for soups; as thickening in gravies and sauces; in batters for coating vegetables and meats before deep frying; in muffins and biscuits, stews and casseroles, salads, cakes, and confections.

This modern approach to food preparation allows management to put to use the talents of young, inexperienced employees who may be working their way through school or, perhaps young housewives who only want to work part-time. An ability to create an agreeable balance between color, texture, and taste is needed by the employee working with convenience foods.

QUESTIONS:

1. One of the factors leading to greater use of convenience foods is
   a. a shortage of regular food.
   b. a shortage of equipment.
   c. a shortage of personnel.
   d. a shortage of business.

2. A convenience food may be defined as
   a. easy to eat.
   b. pre-prepared.
   c. pre-frozen.
   d. ready-to-eat.

3. When a food service establishment uses convenience foods, the preparation procedures include all except one of the following. Which one is it?
   a. Cooking
   b. Thawing
   c. Heating
   d. Serving

4. The quick-setting quality of the vegetable protein gelatins is a major advantage over the traditional animal protein based product. The new gelatin can be expected to set in
   a. 20 minutes.
   b. 15 minutes.
   c. 10 minutes.
   d. 7 minutes.

5. The higher cost of convenience foods is offset by reductions in all but one of the following:
    a. amount of space needed.
    b. amount of equipment needed.
    c. amount of labor needed.
    d. amount of food needed.

6. The quality of convenience foods may be higher than regular foods because they are
    a. processed at the peak of nutritive value.
    b. prepared in small amounts.
    c. processed in large quantities.
    d. prepared in the maximum amount of time.

7. The consistency of quality in convenience foods is due to quality control standards used
    a. during cooking.
    b. during preparation.
    c. during processing.
    d. during serving.

8. A re-con oven is an appliance used in preparing convenience foods. It is a combination of
    a. refrigerator and oven.
    b. freezer and oven.
    c. cold storage and food warmer.
    d. food warmer and defroster.

9. Using instant potatoes offers all except one of the following advantages:
    a. requires less time and energy.
    b. requires less storage space.
    c. requires no inventory.
    d. requires no paring.

ASSIGNMENT:

Write a one page report on the convenience foods that are used in your training station. Identify the foods and describe the various ways in which they are used.

Home Economics
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UNIT VII-1

FUNDAMENTALS OF BUS SERVICE

SUBJECT: What Is Bus Service?

TASKS: Replenishes serving station during serving hours

Fills condiment containers, arranges dishes and silverware in appropriate places

Removes soiled items from tables and stations

Carries loaded trays between kitchen and serving area

Sorts, counts, and stores utensils at designated places

OBJECTIVE: Be able to describe the tasks involved in bus service and its function in the food service business

The tasks which fall under the catagory of bus service may be assigned to someone hired especially for that position or may be divided among other employees. Regardless of who does them, these tasks are most important for the smooth operation of the food service establishment.

Cooperation in working with others is an essential part of bus service. One of the tasks in bus service is replenishing the serving station with clean utensils, china, linens, ice, and condiments during serving hours. This must be done promptly, quietly, and in a sanitary manner. If adequate supplies are not available for the service host or hostess, they cannot provide prompt service to the customers. The person assigned to this task must be alert and keep the serving station replenished without being reminded.

Sanitary methods should be used as supplies are transferred from the trays or carts to the serving station. Glasses should be picked up by the base and stored upside down. Utensils should be picked up by their handles, never by the "business" end. Ice and condiments should be transferred to serving containers with tongs, spoons, or other appropriate utensils; never with fingers! These practices will help to prevent spreading of disease and contamination of food.

Another task classified as bus service is removing soiled items from tables and stations. Trays or carts should be used to save steps and to decrease the amount of time spent on the task. Again, care should be taken to pick glassware up by the base, utensils by the handles, and plates by the rim.

This helps protect the employee from any diseases or illnesses the customer may have.

The task of clearing tables and stations needs to be done quietly and as quickly as possible. Picking up all of one item, such as glassware, before starting with another item helps to speed up the task. Stack items carefully and in an orderly manner on the tray or cart so there will be no danger of breakage or spills. Handle dishes and silver quietly so as not to attract the customer's attention. Cleaning tables rapidly, yet quietly and carefully, helps to speed up service to customers and keep them satisfied.

When carrying loaded trays or pushing carts, one must be sure to watch where he is going. Do not go too fast and, as a safety precaution, back through the door to the kitchen. This helps to prevent spills if someone happens to be coming through the door at the same time.

The person assigned to bus service may be responsible for checking to see that all condiment containers are filled and clean. Additional duties may include making coffee or iced tea, dusting furniture, cleaning table tops, and wiping chairs. The ability to rapidly carry out all tasks assigned during rush periods is essential.

One of the most important parts of bus service is keeping things clean. A variety of cleaning tasks may be assigned depending on the job assignments at the institution or business. More customers are lost because of uncleanliness than for any other reason. Thus, keeping things spotless is a primary factor in customer satisfaction and no cleaning task should be considered unimportant or be done in a careless manner.

The employee assigned to bus service often comes in contact with the customers. A pleasant, cheerful attitude helps make the customers feel comfortable. When customers make requests, they should be filled promptly. If they have a complaint or suggestion, it should be reported to the manager immediately.

QUESTIONS:

1. Mr. Jones, the manager, pointed out that getting and keeping customers is perhaps the most important aspect of food service. Many times customers are lost for reasons other than inferior food. Describe conditions which might discourage customers from patronizing the food service establishment in which you are employed.

2. As a busboy, Joe might not hear complaints from customers as often as the waitresses, but what did Mr. Jones probably tell him to do when he heard a complaint?
   a. Tell the waitress.
   b. Report it to the manager.
   c. Ignore it.
   d. Discuss it with the customer.

3. Mr. Jones said, "In the food service business, the quality of the bus service can affect the efficiency of the operation." Why is good bus service so essential?

4. What precautions should be taken when items are transferred from trays or carts to the serving station? Why?

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UNIT VIII-1

TABLE SERVICE TECHNIQUES

SUBJECT:	Types of Service (Table, Cafeteria, Fountain)
TASK:	Serves food in manner prescribed at place of employment
OBJECTIVES:	Be able to (1) recognize various types of table service (2) describe responsibilities of employees on cafeteria line (3) describe tasks related to fountain service
REFERENCE:	Harris, Ellen Adeline. Professional Restaurant Service. New York: McGraw-Hill Company. 1966, pp. 59-68; 69-75.

Several types of food service, such as American, English, French, Russian, buffet, and cafeteria are used in restaurants and dining rooms. The food service employee should be able to recognize the appropriate setup, equipment, and serving procedure generally used for each type. This information is given in the first part of the assigned reading. The second part of the assignment deals with fountain service. This type of service is commonly used in drug stores, some drive-ins, and occasionally department stores.

CAFETERIA SERVICE

Many food service establishments are using the cafeteria style of service. This type of service involves techniques that differ somewhat from those used in table service. All food items are ready to serve when the customer arrives. The serving equipment is in place and an adequate supply of food is in the serving containers.

Each person who works on the cafeteria line has a responsibility for performing his tasks accurately and efficiently. When one person fails to carry out the tasks assigned to him, service all along the line is delayed and the customer is dissatisfied.

Each person who has been assigned to a serving unit needs to check that the counter is clean and orderly, the necessary equipment is provided, and that all supplies are available. Preservice preparations for the serving line include:

1. Arranging trays at end of line, checking that they are clean and dry
2. Placing silverware in the boxes or wrapping in napkins, whichever method is used at the cafeteria

3. Placing napkins in holders if they are not wrapped around the silver
4. Cleaning all shelves and surfaces along the serving line
5. Putting ice in the units where cold foods are to be served, packing it evenly so plates will not slide or tilt
6. Running water into the steam table as directed by the employer and setting regulators on the electric hot tables
7. Placing dishes in the assigned places
8. Placing a clean wiping cloth in a convenient place below the serving shelf but out of sight of the customer
9. Collecting the serving utensils necessary for the products to be served

One of the areas to which a person working on the serving line might be assigned is the steam table. It is the responsibility of this employee to check that the food in the containers is arranged in an orderly and attractive fashion. Slices of meat may be overlapped, meat balls may be placed in straight rows, and meat loaves may be placed in the center of the pan. Arrangements of this kind make the food look more appetizing than it would if it was just dumped into the container. Garnishes attractively arranged among the food also adds to the appeal of the food.

The rims of the containers should be wiped before putting them into the steam table and kept clean during the serving process. Spilled foods should be wiped up immediately because the heat will bake the particles onto the counter surface and make them difficult to remove. Before service begins, this employee needs to check that the appropriate serving equipment is available and that the plates or serving dishes are in a convenient location.

Employees assigned to the salad counter are responsible for inspecting the counter top and shelves to be sure they are clean before the customers arrive. Salads should be grouped so that similar kinds are placed together. This helps the customer as he makes his selection. Another hint to follow in the arrangement of salads is to arrange them so there is a contrast in color. Putting cole slaw next to potato salad and a cucumber salad would result in an arrangement of several light or white foods. Slices of tomatoes or other colorful foods interspersed with these would make a more attractive arrangement. On the other hand, a beet salad next to tomato slices would not be very pleasing. Keep colors that do not go well together separated by colors that harmonize well with both of them.

Items in the salad counter should be arranged in an orderly manner. Plates of the same size may be put in the same row. Bowls should be placed together and glass and china plates separated. Garnishes should be arranged on the same side of plates that are in the same row. Salads should be placed with the highest part of the lettuce leaf at the back of the plate so the customer can see the salad. Rows of gelatin salads may be alternated with rows of sliced fruits or vegetables to provide a variety in height and type of arrangement.

The appearance of the dessert counter is as important as the rest of the serving line. It must be kept clean and the items should be arranged in an orderly and attractive manner. Desserts should be grouped according to type to aid the customer in making his selection. The same suggestions as were given for salads also apply here, i.e., keep containers of the same size and material together and keep rows straight and even.

Pieces of cake should be placed so both the cake and icing can be seen and pieces of pie so the point is toward the customer. Both cake and pie should be centered on the plate.

One of the most important factors in serving the food to the customer is knowing the size of the portion planned by the cafeteria manager. Portion sizes may be expressed by weight, number, measure, size of scoop or ladle, or a combination of these, such as two #20 scoops. Too large a serving will put the business "in the red" and too small a serving will disappoint the customer. Another decision to make about serving is what type of container is best. Should it be served on the plate or in a separate dish? Should the gravy be put over the meat or at the side of the meat? All these questions should be answered before the customers start arriving because there will be no time to find out once serving begins.

When serving the food, place it so it is within the rim of the plate and does not extend over the edge. Relishes accompanying the meat should be placed next to the meat, on the opposite side of the plate from the potatoes. This will prevent the relish and gravy from mixing. Wipe food particles from the rim of the plate before handing it to the customer.

Be sure to ask the customer for all the information necessary for serving the food. Some of the types of questions that may need to be asked are: Do you care for gravy with your meat? Do you want rare, medium, or well done meat? Do you want toast with the creamed tuna? Do you want dressing on your salad?

Full pans should be exchanged for empty ones instead of putting fresh food into the used containers. Food should be scraped off the sides of the containers to prevent it from drying out and appearing unappetizing. Dish the food from the back of the pan toward the front and in an orderly system across the pan. Salads and desserts should be continually moved forward from the back and fresh items placed at the back.

Regardless of the area where one works, it is important that cafeteria servers be familiar with the food items offered on the day's menu and have some knowledge of the ingredients used in the dishes being served. When a customer is having difficulty making a choice, workers should be able to make a suggestion. Developing speed in serving food and maintaining a polite and tactful serving manner will help in meeting the customers' requests in the serving line.

Another necessary task in cafeteria service is keeping the counters supplied with fresh foods. This person needs to be alert to the needs of the serving counter and familiar with the ability of the kitchen personnel to supply them. His ability to cooperate with both the cooks and the people on the serving line contributes to the smoothness and efficiency of the operation.

One of the characteristics most needed by this employee is alertness. He needs to watch the supply of food carefully and place the order in the kitchen in time to have food ready when it is needed. This requires some knowledge of how long it takes to prepare certain types of foods so the cooks can be given sufficient time for this preparation.

Steps can be saved by carrying empty containers to the kitchen when going after fresh supplies. When carrying the food between the kitchen and serving area, the employee should move quickly and quietly, but never run. He should keep out of the path of the servers and warn them when something hot is being delivered so accidents and burns will be avoided.

QUESTIONS:

1. If an employer said he used American service,
   a. where would the food be placed on the plate?
   b. when are side dishes used?
   c. how are rolls served?
   d. what are the advantages of this kind of service?
   e. how much training is required to be able to serve American style?
2. How does French service differ from other services?
3. What is a guéridon?
4. How is Russian service similar to French service?
5. What is the rule for serving when Russian-type service is used?
6. Why is it important that portions of ice cream for sodas and sundaes be dipped accurately?
   a.
   b.
7. What can be done so ice cream will slide off the scoop easily?
8. A customer complained that his ice cream had bits of ice in it. What may have caused this?
9. Kay was assigned to work at the fountain. What three hints might her employer have given her about dipping ice cream?
   a.
   b.
   c.
10. What is the secret of a good milk shake?

11. What procedure can be used to even flavor distribution in a soda?

12. As Sally arranged the salads at the salad counter she put them in the following order: a row of carrot salads, a row of beet slices, a row tomato slices, a row of cole slaw, a row of cucumber slices, and a row of shrimp salads. They were placed in neat, orderly rows, but the manager made one suggestion. What do you suppose it was?

13. Why is it so important that each person on the serving line keep his area clean?

14. What is the most important thing to find out before service begins?

15. Why do the serving personnel need to be familiar with the foods they are serving?

UNIT VIII-2

TABLE SERVICE TECHNIQUES

SUBJECT: Hints on Meeting the Public

TASK: Welcomes customers in an appropriate manner

OBJECTIVES: Be able to (1) recognize characteristics necessary for success as a service host or hostess
(2) evaluate personal appearance
(3) analyze self in terms of ability to get along with the public

REFERENCES: Harris, Ellen Adeline. Professional Restaurant Service. New York: McGraw-Hill Company. 1966, pp. 4-10.

Field, David. Cinda Service, Sales Hostess. Columbus, Ohio: Ohio State Restaurant Association. 1968, pp. 8-18; 65-67.

First impressions are made of food service personnel the minute the customer enters the food service establishment. These impressions are based on appearance and personality of the employees. Some pointers on both of these factors are given in the assigned readings.

QUESTIONS:

1. According to Harris, what is the most important trait in the food service industry? How would you define this trait?

2. What is one thing that can be done when greeting a customer to make him feel welcome?

3. Which of these things would you do if you were waiting on customers with children?
   a. Move articles on the table out of reach of the child without being too obvious.
   b. Talk to the child and try to amuse him while he is eating.
   c. Ask the child what he would like.

4. Which of these things would you do for a blind customer?
   a. Move objects he might upset.
   b. Offer suggestions about what to order.
   c. Tell the guest what you are putting on the table.
   d. Fill the glasses to the top.

5. List at least three ideas for meeting the public you gained from the assigned references that you intend to put into practice.

ASSIGNMENTS:

I. Rate your personality in terms of the traits listed on page 7 in Harris, Professional Restaurant Service. Be honest in your evaluation. Select one or two areas in which you need improvement and keep a record of your experiences in trying to improve these traits.

II. Develop a check list that you can use to rate your appearance. Refer to Field, Cinda Service, Sales Hostess, pages 9-13, for ideas. After rating yourself and selecting areas in which improvement may be needed, discuss your appearance with your teacher.

UNIT VIII-3

TABLE SERVICE TECHNIQUES

SUBJECT: Procedures for Setting Tables

TASK: Sets assigned tables at the beginning of the work day and maintains tables during service hours

OBJECTIVES: Be able to (1) define terms used in table setting
(2) describe table setting procedures for typical types of service

REFERENCE: Field, David W. Cinda Service, Sales Hostess. Columbus, Ohio: Ohio State Restaurant Association. 1968, pp. 22-32.

There are many different types of table settings used in the food service industry. Some suggestions are given in the assigned reference. If the procedure used at your training station differs from these, you should use the method prescribed by your employer. An awareness of other possibilities can be helpful to you, however, if and when you change positions.

The basic steps in getting a table ready to set are:

1. Place a piece of felt or foam rubber, called a "silence" cloth, on the table if these are used in the food establishment where you are employed.

2. Cover with a clean table cloth. The cloth should extend at least 12 inches over the edge of the table. Sometimes a "top cloth" is placed over the table cloth and removed each time a meal is served.

3. Place an ashtray, sugar bowl, and salt and pepper shakers on each table. Additional ash trays may be needed if the table is occupied by more than two persons.

4. Place "covers" on the table before the customer arrives or immediately after the customer has been seated.

Some clues to remember about placing the items on the table are:

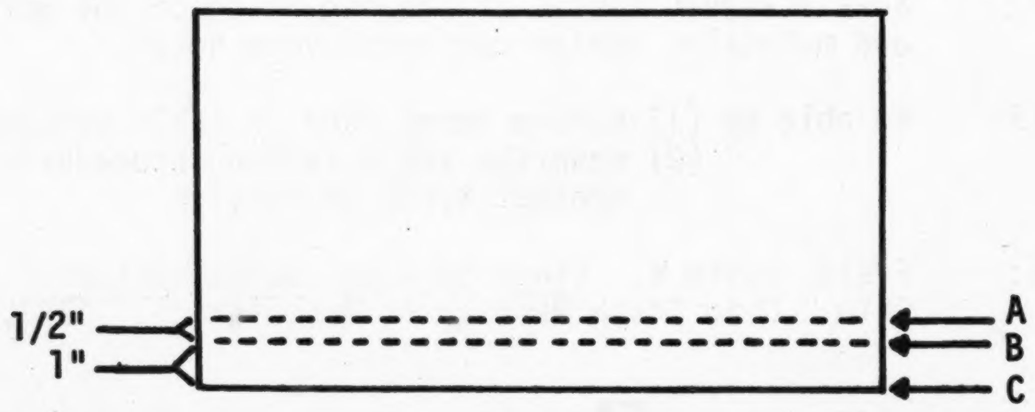
1. The folded napkin may be placed in the center of the cover or to the left side of the cover.
2. The forks are placed to the left of the cover, except for soup and sandwich or salad settings.
3. The bread-and-butter plate is placed above the fork.

4. The salad plate is placed to the left of the forks or over the tip of the fork.
5. The knives and teaspoons are placed to the right of the cover.
6. The water glass is placed to the right of the tip of the dinner knife.
7. The coffee cup is placed to the right of the spoons or over the tip of the spoons.

QUESTIONS:

1. In terms of table settings, what does "cover" mean? edge of cloth?

2. Which line in the illustration represents the set line in table service?



3. Why should silverware be placed on the set line?

4. Would these items be placed on the right or left of a cover for a dinner table setting?
    a. Dinner knife
    b. Teaspoon
    c. Salad fork
    d. Water glass
    e. Dinner fork
    f. Coffee cup
    g. Salad bowl

5. What two things need to be done at the table before the dessert is served?
    a.
    b.

ASSIGNMENT:

Draw the table settings used at your training station.

UNIT VIII-4

TABLE SERVICE TECHNIQUES

SUBJECT:	Hints for Writing and Placing Orders
TASKS:	Fills water glasses and distributes menu Offers suggestions or answers questions about the menu Writes orders following prescribed methods Places orders in kitchen Prepares menu folders
OBJECTIVES:	Be able to (1) describe procedure for writing orders (2) recognize items commonly used on menus
REFERENCE:	Harris, Ellen Adeline. Professional Restaurant Service. New York: McGraw-Hill Company. 1966, pp. 25-53.

Welcome the customer with a smile and be courteous, regardless of the customer's attitude. Place the menu before him and fill his glass with ice water. Give him ample time to make his selection, answering his questions courteously, and making suggestions on special items when asked.

REMINDER: Be familiar with the dishes and ingredients listed on the menu.

A customer will be ready to place his order when he puts the menu down or when he gives a signal. Be ready! If there is a host in the party, he may wish to order for his guests, or he may wish to have each guest order for himself. If this is the case, start with the person to his right.

To provide the best possible service, be systematic. Mentally number the chairs at a table to correspond with the order. This will enable you to deliver the right order to each customer.

List the foods in the order they are to be served. Begin with the appetizers and soups, then list the entrees, and write the desserts and beverages last. Repeat written order to customers to make sure it is correct and to give the customer an opportunity to make changes or additions.

Place the order with the chef or take it to the kitchen, whichever is the practice in the food establishment where you are employed. Make sure your order is understood by the kitchen staff. If a certain food item has been exhausted, return to the customer and inform him. Allow him time to make another choice. You may offer a suggestion, but remember to give him a choice.

QUESTIONS:

1. How will you know when the guest is ready to order?

2. How should the waiter or waitress stand when taking an order?

3. _____ True or False: The waiter should take the order from the customer's left.

4. Jane has trouble remembering which foods each customer has ordered when she serves the plates. What suggestion could you give her?

5. The customer ordered a steak dinner which includes a choice of baked, French fried, or mashed potatoes; a green salad; and choice of beverage. What questions should Mary ask as she takes the order?
   a.
   b.
   c.
   d.
   e.

6. Give the order in which food items should be listed on the check.

7. Betty made a mistake when she took the customer's order. How should she make the correction on the check?

8. What is an á la carte menu?

9. Suppose the menu in the food service establishment where you are employed contained the following foods. How would you describe them to customers?
   a. Crab Louis
   b. Lobster á la Newburg
   c. Russian dressing
   d. Chicken fricassee
   e. Au gratin potatoes
   f. Hollandaise sauce
   g. Peach melba

ASSIGNMENT:

Examine the menu in the establishment where you work. Are there any foods you would have trouble explaining to a customer? Write out the definitions for these words.

Home Economics
Instructional Materials Center
Lubbock, Texas

VIII-5

UNIT VIII-5

TABLE SERVICE TECHNIQUES

SUBJECT: Serving the Food

TASKS: Serves food in manner prescribed at place of employment

Checks the needs of the customers periodically and supplies them with needed items

Clears items from table as the customer is finished with them

OBJECTIVES: Be able to (1) recognize procedures for serving food to customer
(2) recognize procedures for cleaning table

REFERENCE: Field, David W. Cinda Service, Sales Hostess. Columbus, Ohio: Ohio State Restaurant Association. 1968, pp. 32-47; 57-62.

The manner in which the food is served will depend upon the type of service characteristic of the restaurant in which you work.

Study the general rules listed below, but also become acquainted with the rules or policies of the establishment where you are employed.

1. Serve and remove all foods from the left of the customer using your left hand. (This is the most accepted and logical method; however, some food service establishments today serve from the left and remove the dishes from the right. Check with your supervisor for the method to be used.)
2. Serve or remove beverages from the right of the customer using your right hand.
3. Set dishes on the table using four fingers under lower edge and thumb on upper edge. Do not extend your thumb too far in from the rim.
4. If soup or salad is to be served, it is brought in on a tray from the kitchen. The soup spoon is usually placed to the right of the "cover." If a salad is served, the salad fork will be on the left.

5. Do not reach in front of a customer in order to serve someone sitting across from him.

6. When permitting the customer to serve himself, present the serving dish from his left side, placing the silver on the right side with handles turned toward the customer's side.

7. If a soiled or chipped dish is discovered, replace with an acceptable one.

8. Do not touch rim of cups and glasses. Hold cups by the handle or glasses at the base.

9. Ordinarily, glasses are not lifted from the table for refilling. If the table is crowded, however, remove the glasses to a convenient position to refill.

10. Use small plates under cocktail and fruit juice glasses and under cereal and soup bowls.

11. When a salad accompanies the main course, the salad plate is placed to the left of the fork. When it is served as a separate course, it is placed in front of the customer.

12. The bread basket is placed near the center of the table. Individual bread plates are placed above and to the left of the forks.

13. The cup and saucer is placed two inches from the edge of the table and at the right of the spoons with the handle at an angle toward the right of the customer.

14. Individual creamers and small lemon plates are placed to the right of the cup and saucer.

15. The milk glass is placed slightly below and to the right of the water glass.

16. Serve relishes, butter, lemon, or cheese with a fork.

17. Serve foods at correct temperature, hot foods hot; cold foods cold. Hot foods should be served on heated dishes and cold foods on chilled dishes.

Do not neglect the customer after he has been served. Insure the enjoyment of his meal by showing courtesy and skill. Remain at your station in case the customer wishes to get your attention.

Never rush the customer between courses. When the customer has finished with the soup or salad, the main course is brought to him. When the main course is finished, ask if he wishes to see a dessert menu. Sometimes the dessert comes with the dinner order. The waitress then removes the dishes from the main course. Water glasses are refilled and the crumbs are brushed from the table.

Home Economics
Instructional Materials Center
Lubbock, Texas

> **REMINDER:** Remove dishes from the customer's left with the left hand.

After the dessert order is taken, the dessert is brought in on a tray and served from the left. Coffee cups are refilled or fresh coffee is served.

QUESTIONS:

1. From which side of the customer are foods generally served?
2. What procedure should be followed when the customer is serving himself?
3. a. Where is the salad plate placed when it accompanies the main course?
   b. Where is the salad plate placed when it is served as a separate course?
4. Where are the cup and saucer placed?
5. How can correct food temperatures be maintained?
6. According to Field, should the host at a table of guests be served first or last?
7. When serving food to customers in a booth, stand facing the customer to be served and place the plate in front of him with the hand which is ____________________ from him.
8. Arrange the steps for serving a dinner in the correct order:

_____ a. Serve the entree.
_____ b. Place glass of ice water above tip of knife.
_____ c. Remove first course dishes.
_____ d. Serve the appetizer.
_____ e. Remove main course dishes.
_____ f. Serve dessert.
_____ g. Place silverware needed for dessert.
_____ h. Refill coffee cups.

9. Some hints for loading trays are:

a. Place the heavier items in the ____________________.
b. Cups should not be ____________________.
c. Hot dishes should not ____________________.
d. Load tray so it is ____________________.

10. When meat with a bone is served, how should the plate be turned when it is placed in front of the customer?

UNIT VIII-6

TABLE SERVICE TECHNIQUES

SUBJECT: Presenting the Check

TASKS: Itemizes and totals the prices of each order

Presents check to customers

OBJECTIVES: Be able to (1) fill out checks accurately and quickly
(2) describe the procedure for presenting checks to customers

REFERENCE: Harris, Ellen Adeline. Professional Restaurant Service. New York: McGraw-Hill Company. 1966, pp.55-56.

The manner in which you write the check will depend on the restaurant where you work, but all checks should be marked with the date, the table number, and the number of people served. Included on most checks is the waiter's name or number. Check totals to insure accuracy and have check ready for customer. Do not make him wait for his check.

Never give the customer the impression that you are in a hurry for him to leave, even if the table is needed for another party. Thank the customer is a courteous manner when you present the check and invite him to return.

QUESTIONS:

1. Describe a common procedure for presenting the check to the customer when it is to be paid to the cashier.
2. Study Figure 5:1 on page 48 of Professional Restaurant Service. What information should be contained in the customer's check?

UNIT VIII-7

TABLE SERVICE TECHNIQUES

SUBJECT: Table Arrangements for Parties

TASK: Helps arrange tables for special parties

OBJECTIVE: Be able to describe possible table arrangements for parties

After finishing his work one afternoon, Joe was given the assignment of helping with the arrangement for a banquet. Joe was excited because this was his first experience in helping to prepare the dining room for a party. The head waiter wanted everyone to be at his best, so he gave Joe a brief orientation to party planning.

The seating arrangement should be well planned and never overcrowded. The long banquet table should not be used if at all possible, since tables for six or eight are easier to serve and are more pleasant for customers. The seating arrangement should provide for ease of food service whether the banquet is to be served or buffet style of service is to be used.

Some possible table arrangements were tried. Joe found that long tables can be arranged to form V-shapes, U-shapes, zig-zags, and hollow squares. The establishment had a variety of folding tables with different shaped tops. Some were oblong, round, serpentine, oval, quarter-round, and half-round. Several of these were tried until the head waiter decided on the arrangement he thought best suited the occasion.

QUESTIONS:

In trying to remember some of the things he learned about party arrangement, Joe asked himself the following questions:

1. The seating arrangement should be well planned and never ____________.

2. Long tables may be arranged in several ways, namely:
   a.
   b.
   c.
   d.

3. One arrangement should be avoided if possible. Which one is it?

4. Folding tables come with different shaped tops. Some are:
   a.
   b.
   c.
   d.
   e.
   f.

5. The seating arrangement should provide for ease of ________________.

UNIT IX-1

PROCEDURES FOR RECEIVING AND STORING FOODS

SUBJECT:	Receiving Records
TASK:	Follows standard procedures for receiving food and supplies
OBJECTIVES:	Be able to (1) identify tasks generally performed by the receiving clerk in food service (2) recognize forms necessary for receiving food and supplies for storage (3) analyze standard methods of receiving food and supplies
REFERENCE:	Stokes, John W. Food Service in Industry and Institutions. Dubuque, Iowa: William C. Brown Company. 1960, pp. 85-87.

The Receiving Clerk

The receiving clerk is an important member of the cost control team since he must make sure that all orders of food and supplies are received and are inspected both for quantity (count or weight) and quality. The counting and/or weighing is done by the receiving clerk; however, the manager, food service supervisor, or head cook are usually responsible for checking the quality of the merchandise.

As a food service employee, one may be given some responsibility for receiving food and supplies which have been ordered. The person who performs these tasks should have some knowledge of foods, be able to keep complete and accurate records, be able to accurately check invoices or delivery slips against the items received, be trustworthy, and be able to maintain daily receiving records.

Records and Forms

Receiving records do not attempt to classify merchandise. These records ordinarily are for the purpose of maintaining a daily record of food and supplies received by the establishment.

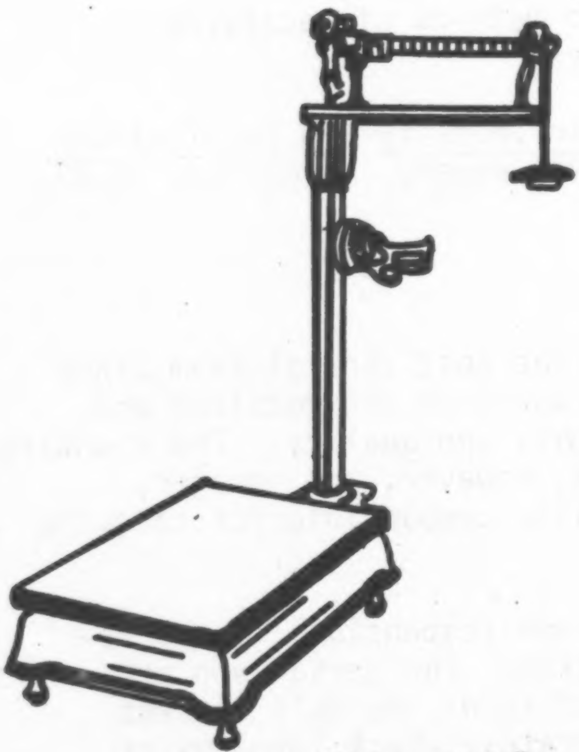
The receiving records contain information concerning the vendor's name, date, description of items, and quantity received. The description of the item may include the brand name or other identifying information.

The quantity is designated by count or weight. In some instances the unit and total cost of items and the order number may also be recorded. An example of the receiving record may be found on page 87 of Food Service in Industry and Institutions.

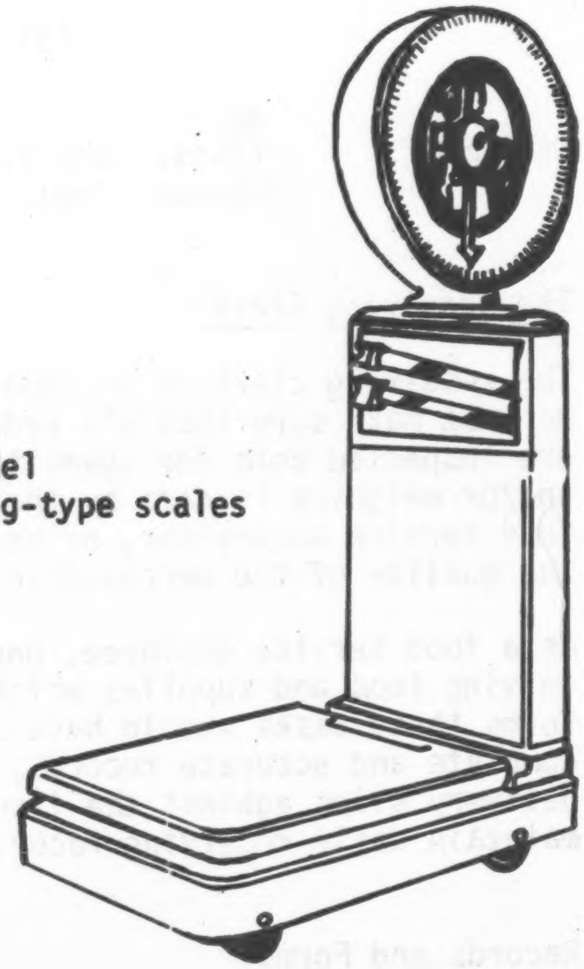
Methods of Receiving

Although methods of receiving food and supplies may vary from one food service operation to another, the important factor to remember is that the food and supplies should be received and checked in an efficient and orderly manner.

Food that is purchased by weight should be weighed when it is received since weight shortages in quantity purchases are extremely serious in food cost control. Automatic indicating-type or beam-type scales are needed in the receiving area for accurate weighing. Examples of these two types of scales are illustrated.



Floor model
beam-type scales



Floor model
indicating-type scales

Items which are not purchased by weight should be counted accurately to make sure that all items have been received as shown on the delivery slip from the vendor. Any error in count should be called to the attention of the person in charge of the receiving area so that proper procedures can be followed.

QUESTIONS:

1. The person who has the responsibility of receiving food service supplies is the ______________________________.

2. Jody has been sucessful in learning the food preparation tasks at his training station. The manager has decided that Jody should also be given an opportunity to work in the receiving area. Since he has some knowledge of food and is a dependable employee, he will assist the receiving clerk for the next few weeks. Jody likes working with people and is enthusiastic about food preparation and service. He is not particularly interested in the details of record keeping; however, he is willing to give it a try.

   a. Using the assigned reading in Food Service in Industry and Institutions to support your answer, what are some of the basic characteristics a person must have to be able to handle the responsibilities of receiving food and supplies for storage? List at least four characteristics.

   b. Analyze Jody's potential as a receiving clerk in this food service operation, comparing the list of characteristics you have just made with those characteristics that Jody possesses.

3. Proper methods of quality control minimize the chances of accepting unsatisfactory merchandise. When food and supplies are received from the vendor, the check for quality is usually made by the (Select the best answer.)
   a. manager.
   b. cook's helper.
   c. stock clerk.
   d. inventory clerk.

4. Two methods of receiving food and supplies are (1) the conventional method and (2) the "blind" receiving method. Explain the difference between these two methods.

5. Receiving records vary according to the food service establishment. What are four items which all receiving records must contain in relation to the food and supplies received?

6. Two basic requirements of food cost control records are that they be complete and accurate. Receiving records will be of little value unless they are (Select the best answer.)
   a. kept daily.
   b. used as a purchase price record.
   c. kept separately from inventory records.
   d. reviewed by the cook's helper.

7. James, the food service employee, is assisting the receiving clerk by checking the delivery from A & B Food Products Company. Using the information from the delivery invoice as shown, complete the receiving report. Follow the form shown on page 87 in Food Service in Industry and Institutions.

INVOICE

No. 7893

A & B FOOD PRODUCTS COMPANY
100 Main
Anytown, Texas

Order No. 725

Date: Sept.1 19--

To: Dixie Cafeteria
10 W. 6th
Anytown, Texas

QUANTITY		ITEMS	PRICE	
AMT	UNIT		UNIT	TOTAL
12	1-lb cans	Ground Black Pepper		
2	30 doz case	Grade A Large Eggs		
4	100 lb bag	All purpose flour		
6	6-#10 cans per case	Sliced apples		
1	100-lb sack	Irish potatoes		
1	50-lb sack	Onions		

8. Betty was receiving the morning delivery of bakery products. She noticed that three bread wrappers were broken open. Which is the best course of action for Betty to follow?

   a. Accept the delivery and report the condition of the bread to the manager.
   b. Accept the balance of the delivery but refuse the three loaves of bread.
   c. Check with the food service supervisor to determine the proper procedure before accepting the delivery.
   d. Call the supplier to tell him about the three bread wappers.

   Support your answer by giving reasons for your choice.

UNIT IX-2

PROCEDURES FOR RECEIVING AND STORING FOODS

SUBJECT: Storage of Food and Supplies

TASK: Stores food and supplies in appropriate facilities and at proper temperatures

OBJECTIVES: Be able to (1) describe proper storage methods for certain foods and supplies
(2) explain the purposes of inventories in the food service operation

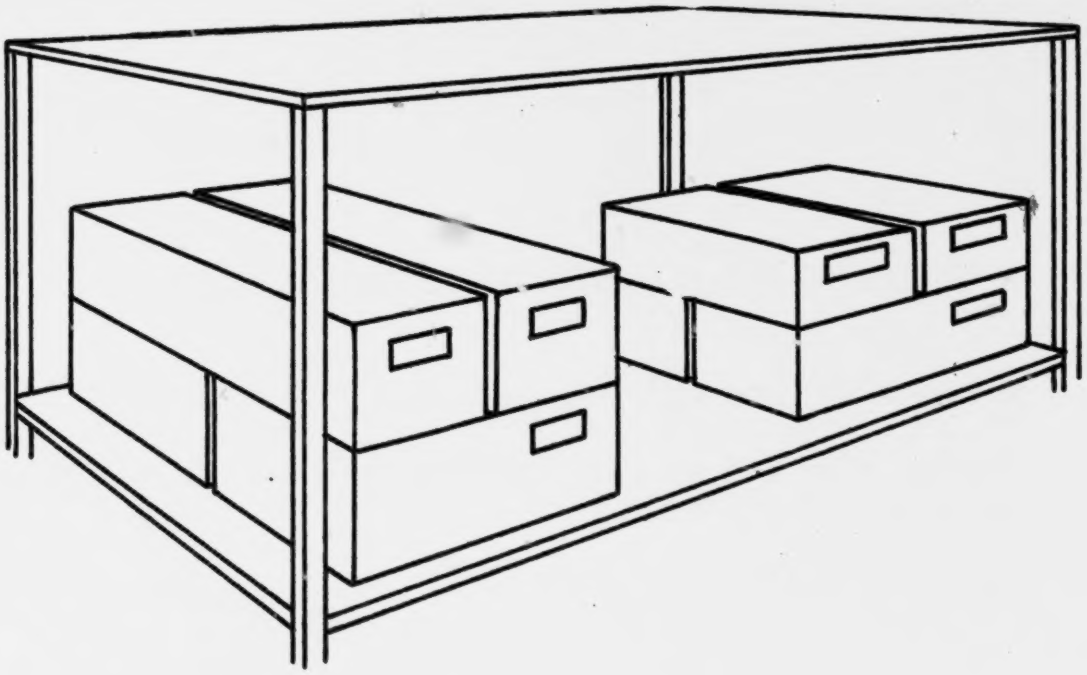
REFERENCE: Stokes, John W. Food Service in Industry and Institutions. Dubuque, Iowa: William C. Brown Company. 1960, pp. 44-47 (Dry Food Storage Area): 86-94; 195-198.

Storing foods and supplies in the appropriate places and at the correct temperatures helps to maintain the quality of the food. Suggestions for the storage of foods in the different types of storage facilities are given below.

Dry storage. The foods are usually arranged according to the type of commodity and in alphabetical order. This makes it easier for the personnel who are to collect the items for use in the kitchen to find them in a short amount of time. When putting up a new delivery, the items should be placed behind those already there. This insures that no food will be pushed to the back and remain in storage too long. Arranging stock with the labels toward the front also aids in quick identification of the items. Cans may be stacked in two or three layers, depending on the shelf space. Cases of food should be cross-stacked to allow for adequate ventilation (see illustration on page A-236).

Food items, such as potatoes which are stored in bags, should also be cross-stacked for ventilation purposes.

Refrigerated storage. It is important that foods be stored with sufficient space in between to allow for air circulation. New stock should be stored behind the food already on hand and no food should be placed on the floor of walk-in refrigerators. Egg cartons should be cross-stacked to allow for air circulation. Butter, milk, and cream should be covered tightly and stored away from foods having odors because these foods absorb odors easily. Eggs should be stored with the pointed end down because this allows the air cells to remain in their correct position and tends to prevent breakage.



Large pieces of raw meat and poultry are often stored uncovered to allow for adequate air circulation. Fresh fish should be stored in cracked ice and at a distance from foods like eggs, which absorb odors.

Fruits and vegetables should be stored at least eight inches off the floor when placed in walk-in refrigerators. Foods delivered in crates should be cross-stacked.

QUESTIONS:

1. After the food and supplies are received, they are stored properly until use. The types of storage facilities in most food service operations are
   a.
   b.
   c.
   d.
2. Dry groceries, canned goods, and staples should be stored in ________.
3. Perishable foods, such as fresh fruits and vegetables, should be stored ____________________.
4. Paper goods, cleaning supplies, and insecticides are to be stored in ________________________.
5. Frozen vegetables and pastries may be stored in __________________.

6. The dry storeroom should be kept at temperatures from
   a. 40° to 50° F.
   b. 45° to 50° F.
   c. 50° to 55° F.
   d. 45° to 55° F.

True or False

7. Canned goods lose nutrients if kept at room temperatures of 72° F. for long periods of time.

8. Canned goods should be stored at temperatures of 65° to 68° F.

9. Thermometers in refrigerator storage should be read two to four times a day.

10. Match the types of refrigeration facilities with the appropriate temperatures for each:

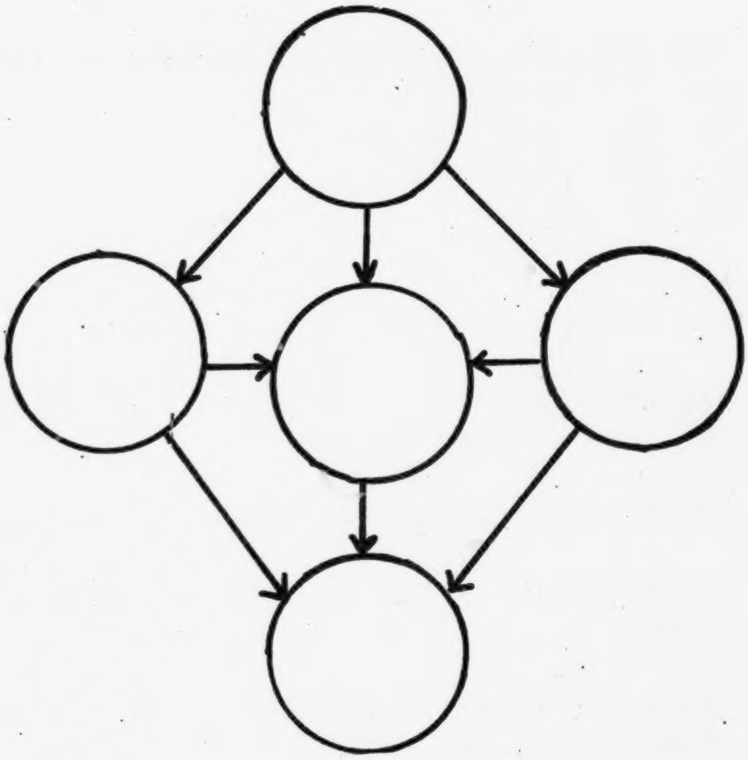
TYPES	TEMPERATURES
______ 1. Deep Freeze	a. 31° to 34° F.
______ 2. Meat Box	b. 30° to 35° F.
______ 3. Fruit and Vegetable Box	c. -10° to 5° F.
______ 4. Fish Box	d. 33° to 37° F.
______ 5. Dairy Box	e. 32° to 37° F.
	f. 40° to 45° F.
	g. 31° to 40° F.

11. Explain the four essentials in maintaining the dry storeroom.

12. Insert the appropriate answer into each circle to complete the flow chart showing the relationships between each of the following areas:

AREAS

a. Receiving
b. Final food preparation
c. Preliminary preparation
d. Dry storage
e. Refrigerated storage



13. When are physical inventories of the storage areas usually taken?

14. What is counted in the physical inventory?

15. How is the value of items on hand determined?

16. Why are small amounts, such as fractions of a pound, usually not counted?

17. How is the overall cost of food determined?

18. What are four steps in taking a physical inventory?

19. After the inventory is completed and checked for accuracy, where is the information entered?

20. Jim was assigned to help with the storing of food and supplies. Which of the following list of things would you not do if you were Jim? Give reasons for your choices.
    a. Place new stock in front of old stock.
    b. Cross-stack bags of potatoes.
    c. Place foods in walk-in refrigerator close together.
    d. Store fish at a distance from milk.
    e. Store fruits on shelves in walk-in refrigerator, not on the floor.

ANSWER SHEETS
FOR
INSTRUCTIONAL MATERIALS STUDY QUESTIONS

Answer Sheet
for
UNIT I-1

WHAT IS A FOOD SERVICE EMPLOYEE?

SUBJECT: Job Opportunities in Food Service

NO STUDY QUESTIONS

ASSIGNMENT: List the tasks you perform on your job. Discuss with your teacher the kinds of information you need in order to do a good job.

Answer Sheet
for
UNIT I-2

WHAT IS A FOOD SERVICE EMPLOYEE?

SUBJECT: Employee Qualifications

1. Any six of the following or any related attitudes:
   Loyalty
   Concern for others
   Open-mindedness
   Cooperation
   Flexibility
   Sincerity
   Friendliness
   Respect for others
   Interest in work

ASSIGNMENT: Select at least two or three areas in which you feel improvement is needed. Work out a plan for making these changes in yourself. Turn your plan in to your teacher and occasionally discuss your progress with her.

Answer Sheet
for
UNIT II-1

SANITATION

SUBJECT: Food Contamination and Poisoning

1. Hands that touch the hair become contaminated by the organisms which collect in the hair. Hair nets or caps are worn to keep hair from frequent contact with hands and food.

2. 40°-140° F.

3. Any type of disease or illness caused by taking into the body contaminated or adulterated food and drink.

4. False

5. a. Intestines of humans, birds, and animals--sometimes "carried" by a healthy person
   b. Meat, milk, milk products, poultry, fish, eggs, custard-filled bakery goods
   c. Good refrigeration and safe processing methods

6. a. Nose, throat, sores, boils, skin
   b. They produce a poison.
   c. Handle food only with clean hands.
      Keep food refrigerated at or below 40° F. before and after preparation.
   d. Cream-filled pastries, meat products, fish, salads, sandwiches, creamed dishes, ham, poultry dressing, chicken or turkey salad

7. a. Everywhere in the soil
   b. Non-acid or low acid home-canned foods

8. Botulism

9. Those caused by foods containing harmful bacteria
   Those caused by poisons produced by bacteria in the food

10. Poultry products should not be left at room temperature more than four hours. It should have been refrigerated.

11. Yes, ham and poultry mixtures need to be refrigerated to prevent growth of bacteria.

12. The stew should have been placed in shallow pans.
    The stew should have been refrigerated immediately.

13. Staphylococcus

ASSIGNMENT: Choose at least three things from this unit and/or the pamphlet, Here's How, that you can do to improve your work habits in relation to cleanliness and sanitation. Work out a plan for improvement in these areas. With the aide of your teacher, evaluate your progress each week for as long as necessary to form the habit.

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Answer Sheet
for
UNIT II-2

SANITATION

SUBJECT: Sanitation Codes

1. Food and Drug Administration
   Public Health Service
2. U. S. Department of Agriculture
3. State departments of health
   City health departments

ASSIGNMENT: Find out what laws protect food in your city. What sanitation ordinances are in effect where you live? Which of these laws and ordinances affect you on the job as a food service employee?

Answer Sheet
for
UNIT II-3

SANITATION

SUBJECT: Procedures for Dishwashing

1. Scraping and removing left-over food; pre-rinsing; washing; rinsing
2. To prevent the spread of infectious diseases since glasses touch human lips
3. The detergent solution or the rinse water cannot act on all surfaces of each utensil.
4. It is not sanitary.
5. 170° to 190° F.
6. Bactericides are used when it is difficult to maintain proper rinse water temperatures.
7. Detergents are cleaning agents which are designed to wash dishes thoroughly without forming suds.
8. a. Detergents which contain a "wetting agent" are desirable for washing plastic and other non-metal trays and dishes.
   b. Detergents with "wetting agents" permit drying of china without "spotting."
9. The large amount of drying space required at the end of the conveyor line
10. The three-compartment sink is preferred because it provides separate compartments for soaking, washing, and rinsing pots and pans.
11. One sink is for soaking, one for washing, and one for rinsing.
12. Bacteriological
13. Food containers
14. Brushes
15. False

16. Too cold--the cleansing will not be complete
Too hot--remaining food particles will be baked on the dishes

17. Pre-washing reduces the chance of food particles clogging the spray tubes in the washer, and it keeps the wash water cleaner.

18. Three minutes; two minutes

19. Hot water method and chlorine treatment method

20. Once

ASSIGNMENT: Describe the dishwashing procedure used in the establishment where you work. Which method of sanitizing is used if dishes are washed by hand?

Answer Sheet
for
UNIT II-4

SANITATION

SUBJECT: Cleaning and Sanitizing

1. Clean and safe

2. When sanitation is a way of life, it is something that is done as an ordinary procedure. Its importance is recognized and everyone accepts his share of the responsibility for maintaining high standards of cleanliness and sanitation.

3. Cleanliness

4. a. To prevent disease
   b. To prevent food poisoning
   c. To prevent spoilage
   d. To prevent off odors and off flavors

5. a. Equipment may not function properly
   b. The quality of the product may be affected.
   c. Maintenance and repair costs will increase.

6. Bacteria

7. a. Store equipment, dishes, pots and pans, and tools in enclosed areas or upside down.
   b. Cover food left standing.

8. Equipment

9. Cleaning indicates absence of soil.
   Sanitizing indicates absence of harmful bacteria, molds, fungi, or yeast.

10. Water, friction, and a wetting agent (soap or detergent)

11. Chemicals
    Temperature

12. To insure that all necessary cleaning and sanitizing is done

13. False

14. False

15. False

16. True

17. False

18. False

Answer Sheet
for
UNIT II-5

SANITATION

SUBJECT: Care of Furniture, Floors, and Surface Areas

1. Dissatisfied
2. Clean
3. Running your hand over the table top
4. Once
5. Equipment
6. Figure 8
7. F, Hardwood
8. B, Terrazzo
9. E, Vinyl Tile
10. F, Hardwood
11. D, Rubber Tile
12. B, Terrazzo
13. C, Clay Tile
14. D, Rubber Tile
15. F, Hardwood

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Answer Sheet
for
UNIT III-1

SAFETY PRECAUTIONS

SUBJECT: Safety Precautions

1. Place soiled knives on drain rather than in sink.
2. Turn flame off when removing utensils from range.
3. Place articles securely on shelf so they will not fall off.
4. See that electric cords are in good repair.
5. Use step ladders that are sturdy and in good repair.
6. Keep corridors and stairways free from debris.
7. Always dry hands before touching electrical equipment.
8. Keep pot handles turned toward inside of range away from traffic.
9. Clean up spilled foods immediately.

ASSIGNMENTS:

I. From the list of safety precautions, make a check list which might be useful to you at your training station. Add others which apply specifically to your work.

II. Find out what kind of fire extinguishers are used in your place of employment. Describe the kind of fires for which they may be used and how to use them.

Answer Sheet
for
UNIT IV-1

COMMERCIAL KITCHEN EQUIPMENT

SUBJECT: Blender

NO STUDY QUESTIONS

Answer Sheet
for
UNIT IV-2

COMMERCIAL KITCHEN EQUIPMENT

SUBJECT: Meat Slicer

NO STUDY QUESTIONS

Answer Sheet
for
UNIT IV-3

COMMERCIAL KITCHEN EQUIPMENT

SUBJECT: Mixer

NO STUDY QUESTIONS

Answer Sheet
for
UNIT IV-4

COMMERCIAL KITCHEN EQUIPMENT

SUBJECT: Food Cutter or Chopper

1. See that the machine is completely assembled with all parts in place.
   See that the clamp nuts are turned to hold bowl guard in place.

2. Gradually
   2/3 full
   Never use fingers to push food under blades.

3. Scrape food down from outer edge toward bottom of bowl.

4. Because the knives continue to rotate several seconds after machine is turned off

5. Prepare it for next continuous operation (or clean it).

6. A large spoon
   Opposite to direction the bowl is rotating

7. It would damage knives and gears.

8. Replace guard
   Attach bowl to base
   Reattach knife blades to shaft
   Drop guard into position

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Answer Sheet
for
UNIT IV-5

COMMERCIAL KITCHEN EQUIPMENT

SUBJECT: Toasters

1. a. The heating element which is insulated in a frame
2. d. All of these
3. a. A soft, damp cloth
4. b. A non-abrasive cleaner
5. c. Electrical element
6. c. Disconnect it
7. a. Dry

Answer Sheet
for
UNIT IV-6

COMMERCIAL KITCHEN EQUIPMENT

SUBJECT: Conveyor Toasters

1. Wipe outside, remove crumbs, remove toast chute, and clean base

2. A non-abrasive cleaner

3. Keep fingers away from elements when loading the toaster
   Unplug toaster when not in use

Answer Sheet
for
UNIT IV-7

COMMERCIAL KITCHEN EQUIPMENT

SUBJECT: Refrigerator

1. Circulate
2. Covered
3. Frost
4. Coldest
5. 1/4
6. Daily
7. Baking soda

Answer Sheet
for
UNIT IV-8

COMMERCIAL KITCHEN EQUIPMENT

SUBJECT: Bain-Marie

1. False
2. True
3. True
4. False
5. True

Answer Sheet
for
UNIT IV-9

COMMERCIAL KITCHEN EQUIPMENT

SUBJECT: Cold Food Server

1. Ice

2. Detergent

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Answer Sheet
for
UNIT IV-10

COMMERCIAL KITCHEN EQUIPMENT

SUBJECT: Steam Table

1. b. Order in which it will be placed on plate

2. c. A temperature to hold food at 140° F.

3. a. Immediately after service is completed

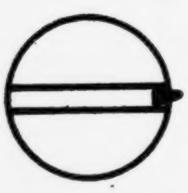
4. b. 170°-180° F.

Answer Sheet
for
UNIT IV-11

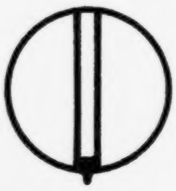
COMMERCIAL KITCHEN EQUIPMENT

SUBJECT: Electric and Gas Ranges, Hot Tops, Broilers, Stack Ovens, and Compartment Steamers

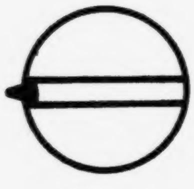
1.



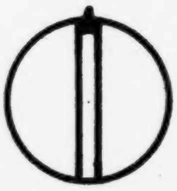
High



Medium



Low

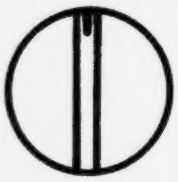


Off

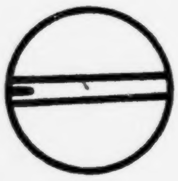
2. Only until the food starts to cook

3. Before turning on the burner valve

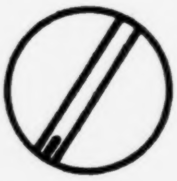
4.



Off



High



Low

5. Turn directional heat control switch to medium or high.
   Set thermostat at desired temperature.
   Let oven preheat.

6. To prevent loss of heat and to produce a better product

7. Turn thermostat as high as possible.
   Light match.
   Turn on main burner valve.
   Set thermostat.
   Let oven preheat.

8. That it would not heat any faster with a high temperature setting

9. Close and lock door.

10. No, she should have waited until the steam was released to open the door and she should have pulled the steam valve when she closed the door.

Answer Sheet
for
UNIT IV-12

COMMERCIAL KITCHEN EQUIPMENT

SUBJECT: Vegetable Peeler

1. Permanently installed
2. Water
3. Sweet potatoes, carrots, or parsnips
4. Abrasive
5. 2/3
6. 45 to 90 seconds
7. Overloading or underloading reduces efficiency

Answer Sheet
for
UNIT IV-13

COMMERCIAL KITCHEN EQUIPMENT

SUBJECT: Garbage Disposals

1. b, A garbage disposal unit
2. a, Activated
3. c, Gradually
4. b, The grinding has stopped
5. a, In the walk-in refrigerator

Answer Sheet
for
UNIT IV-14

COMMERCIAL KITCHEN EQUIPMENT

SUBJECT: Knives

1. a. Boning
   b. Bread
   c. Fruit and salad
   d. French
   e. Paring
   f. Peeler
   g. Slicer

2. 1. g, Slicer or b, Bread
   2. f, Peeler
   3. a, Boning or c, Fruit and salad
   4. d, French
   5. b, Bread
   6. c, Fruit and salad
   7. a, Boning
   8. g, Slicer
   9. d, French
   10. e, Paring
   11. g, Slicer
   12. a, Boning

3. b

4. a

5. b

6. b

7. b

8. a

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IV-15

Answer Sheet
for
UNIT IV-15

COMMERCIAL KITCHEN EQUIPMENT

SUBJECT: Hand Utensils

1. a. Cook's, utility or kitchen fork
   b. Sandwich spreader
   c. Pie knife
   d. Spatula
   e. Turner

2. 1. b
   2. e
   3. d
   4. d
   5. a
   6. c
   7. a
   8. d

3. a. Ladle: used to portion liquids or emulsions
   b. Pastry brush: used to spread melted butter on breads, etc.
   c. Pierced serving spoon: used to serve foods which need to be drained
   d. Plate scraper: used to scrape dishes and mixing bowls
   e. Tongs: used to serve foods without touching them
   f. Wire whip: used for stirring or whipping foods

Answer Sheet
for
UNIT IV-16

COMMERCIAL KITCHEN EQUIPMENT

SUBJECT: Dippers

1. c. Handle

2. d. Bowl

3. a. Vane

4. b. Lever

5. a. 10 T.
   b. 1/2 c.
   c. 6 T.
   d. 1/3 c.
   e. 1/4 c.
   f. 3 T.
   g. 2-2/3 T.
   h. 2 T.

6. h. 30 servings per quart

7. f. 24 servings per quart

8. c. 20 servings per quart

9. b. 16 servings per quart

10. e. 12 servings per quart

11. g. 10 servings per quart

12. a. 8 servings per quart

13. d. 6 servings per quart

14. The number of the dipper size is the same as the number of servings per quart.

15.

a.	12 servings per quart	2-1/3 to 3 ounces per serving
b.	16 servings per quart	2 to 2-1/4 ounces per serving
c.	6 servings per quart	6 ounces per serving
d.	10 servings per quart	3 to 4 ounces per serving
e.	8 servings per quart	4 to 5 ounces per serving
f.	24 servings per quart	1-1/2 to 1-3/4 ounces per serving
g.	20 servings per quart	1-3/4 to 2 ounces per serving
h.	30 servings per quart	1 to 1-1/2 ounces per serving

16. e. #16

17. c. #10

18. a. #6

19. f. #20

20. b. #8

21. g. #24

22. d. #12

23. h. #30

24. a. Wash in warm water.
    b. Use recommended amount of detergent.
    c. Rinse in clear water with recommended amount of disinfectant.
    d. Allow to drain and air-dry.

ASSIGNMENT: List at least three of the pieces of equipment described in this unit on "Commercial Kitchen Equipment" (IV-1 through IV-16) which you often use at your training station. What procedures do you follow in the care of these pieces of equipment? What safety precautions do you observe as you use or clean these pieces of equipment?

Answer Sheet
for
UNIT IV-17

COMMERCIAL KITCHEN EQUIPMENT

SUBJECT: Storage of Equipment

1. Supplies should be stored near equipment to be used in preparation.
2. Store so it is
    a. easy to get to
    b. out of the way
    c. protected from contamination

Answer Sheet
for
UNIT V-1

TECHNIQUES OF FOOD PREPARATION

SUBJECT: Quality Food Preparation

1. a. She did not read the recipe carefully before she began.
   b. She did not check to see that she had the necessary equipment.
   c. She did not apply terms in the recipe but beat the mixture instead of stirring it.
   d. She did not make herself a time schedule.

2. a. She did not read the recipe carefully before she began.
   b. She did not check to see that she had all the necessary ingredients.
   c. She did not make the substitution for Cornmeal Muffins.
   d. She did not check to see that she had the necessary equipment.

3. a. The information in the recipe failed to:
      (1) state the number of servings.
      (2) give the cooking temperature.
      (3) use familiar cooking terms.

   b. The use of a standardized recipe assures one of a quality product time after time. It also saves time since all necessary information is included.

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Answer Sheet
for
UNIT V-2

TECHNIQUES OF FOOD PREPARATION

SUBJECT: Terminology Used in Food Preparation--TERMS

1. a. Pan-fry----cook in small amount of fat
Saute------to brown quickly in a small amount of fat, turning frequently

b. Dice-------cut in cubes
Mince------cut or chop into very small pieces

c. Boil-------to cook in liquid until bubbles rise continuously and break on surface
Simmer-----to cook in liquid at a temperature of about 185° F., bubbles form slowly and break below the surface

d. Blend------to mix thoroughly two or more ingredients
Cream------to mix one or more foods until smooth and creamy, usually applies to fat and sugar

e. Chill------to place in the refrigerator until cooled to 40° to 45° F.
Cool-------to lower the temperature

f. Boil-------to cook in liquid until bubbles rise continuously and break on the surface
Parboil----to boil until partially cooked

g. Beat-------to make a mixture smooth, using an up-and-over motion
Whip-------to beat rapidly cream, eggs, and gelatin dishes to incorporate air and increase volume

h. Brush------to spread melted fat with a pastry brush
Dot--------to cover with small particles, as to dot with butter

i. Cut--------to divide food into small pieces
Cut-in-----to break fat into small particles by using two knives or a pastry blender

j. Blanch-----to dip into boiling water making skins easy to remove or to precook
Scald------to heat to a temperature just below the boiling point

2. a. Hollandaise is cooked and tartar is uncooked.
   b. Hollandaise is usually served over vegetables and tartar is served with seafoods.

3. Whip. Souffles are made with stiffly beaten egg whites; therefore, whipping the egg whites would be the correct procedure.

4.
1.	F.	With cheese
2.	O.	To cook by dry heat
3.	R.	To moisten while cooking
4.	J.	To roll in bread crumbs
5.	K.	To lessen the strength by adding liquid
6.	P.	To decorate
7.	Q.	Italian cheese
8.	B.	Any mashed or strained food
9.	M.	To let food stand in a marinade or dressing
10.	L.	To liquify by heat
11.	E.	To separate with a sieve
12.	C.	To simmer in a small quantity of liquid
13.	G.	To mix foods with a circular motion
14.	H.	To brown the surface of meat with intense heat
15.	I.	To strip off the outer coating

5.

Meat Center	Vegetable Center (cooked)	Salad Center (uncooked)	Flour Mixture Preparation Center
Bread Deep-fat-fry Baste Braise Broil Sear Brown	Peel Scallop Blanch	Chop Garnish Grate Marinate Mince	Cream Fold Blend Whip Sift Cut-in Mix

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Answer Sheet
for
UNIT V-2

TECHNIQUES OF FOOD PREPARATION

SUBJECT: Terminology Used in Food Preparation--ABBREVIATIONS

1. Chili Con Carne
   a. 3 lb.
   b. 1 gal.
   c. 9 lb.
   d. 8 oz.
   e. 1-1/2 qt.
   f. 2 oz.
   g. 3-4 oz.
   h. 3 T., Tb., or Tbsp.
   i. 3 gal.
   j. 3 hr.
   k. 5 oz.
   l. 2 c.

   Fudge
   m. 2 c.
   n. 2/3 c.
   o. 1-1/2 T., Tb., or Tbsp.
   p. 2 sq.
   q. f.g.
   r. 3 T., Tb., or Tbsp.
   s. 1 tsp.

2. a. calories
   b. pound
   c. 350 degrees Fahrenheit
   d. cups
   e. minutes
   f. few grains
   g. bushel
   h. seconds
   i. teaspoon
   j. medium
   k. tablespoons
   l. tablespoons
   m. hour
   n. teaspoon
   o. tablespoons Monosodium Glutamate
   p. large
   q. ounces
   r. temperature
   s. small
   t. weight

Answer Sheet
for
UNIT V-2

TECHNIQUES OF FOOD PREPARATION

SUBJECT: Terminology Used in Food Preparation--SUBSTITUTIONS

1. Substitute:

   9 T. cocoa plus 3 T. fat for 3 sqs. chocolate

   1 c. fresh milk plus 3 t. baking powder for 1 c. sour milk and 1 t. soda

   1-3/4 c. all-purpose flour plus 4 T. cornstarch for 2 c. cake flour

2. a. 1 c. reconstituted non-fat dry milk plus 2 t. fat = 1 c. milk
   b. 6 T cocoa and 2 T. fat = 2 sqs. chocolate
   c. 1-3/4 t. cream of tartar = 2 T corn syrup

Answer Sheet
for
UNIT V-2

TECHNIQUES OF FOOD PREPARATION

SUBJECT: Terminology Used in Food Preparation--EQUIVALENTS

1. a. 1 T.
   b. 1 c.
   c. 1 c.
   d. 1 pt.
   e. 1 pk.
   f. 1 bu.
   g. less than 1/8 t.
   h. 1 qt.
   i. 1 gal.
   j. 1 lb.
   k. less than 1/8 t.
   l. less than 1/8 t.
   m. 4 T.
   n. 8 T.
   o. 12 T.

2. a. 1 pt.
   b. 1 pt. or 1lb.
   c. 1 T. and 1 t.
   d. 1-1/2 lb.
   e. 1/4 c.

3. a. 2-1/4 c.
   b. 1-1/2 c.
   c. 1-6 oz. can
   d. 1-6 oz. can
   e. 1/2 gal. or 2 qt.

4. a. 30 lb.
   b. 1-1/2 lb.
   c. 3/4 c.
   d. 3 lb. 12 oz. or 3-3/4 lb.
   e. 2 lb. 4 oz. or 2-1/4 lb.
   f. 2 lb. 4 oz. or 2-1/4 lb.
   g. 6 lb.

5. a. 1 gal.
   b. 1 qt.
   c. 1 pt.
   d. 1 pt.
   e. 1 c.
   f. 1 c.
   g. 1 T.
   h. 1 T.

6. a. 2 qt.
   b. 1/2 c.
   c. 1/2 c.
   d. 1 T.
   e. 3 c. or 1-1/2 pt.

Answer Sheet
for
UNIT V-3

TECHNIQUES OF FOOD PREPARATION

SUBJECT: Standard Weights and Measurements Used in Food Preparation

1. Move a straight edge knife or spatula across the top edge of measuring container to remove excess ingredient.

2. The straight edge metal cup gives greater accuracy when measuring dry and solid ingredients. The glass cup with the lip is more practical for measuring liquids.

3. Brown sugar should be packed firmly to insure accuracy of the measurement. When loosely packed, the amounts would vary.

4. Fill the bowl of the 1/4 teaspoon, and level off. Using the tip of a knife make a lengthwise cut the length of the spoon, remove half of the allspice on waxed paper, 1/8 teaspoon will be left in the spoon.

5. One tablespoon

6. To make it light and remove lumps

7. A standard measure always provides the same amount of the ingredient. This helps to insure products of consistent quality.

8. Because it is faster and more accurate

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Instructional Materials Center
Lubbock, Texas

Answer Sheet
for
UNIT V-4

TECHNIQUES OF FOOD PREPARATION

SUBJECT: Techniques of Portioning Foods

1. False

2. b. Food choices
   c. Serving methods
   d. Clientele
   e. Cost of food and supplies

3. Any five of the following:
   a. Food service personnel might not request the correct amount of food and supplies.
   b. There may be large amounts of leftovers.
   c. Waste of food and loss of nutrients might increase.
   d. Food preparation would be more difficult.
   e. Customers may not be satisfied.
   f. The amount of time required for serving the plate would be increased.
   g. Servings might not be uniform.
   h. It would be difficult to establish selling price in relation to food cost.

4. a. Select the proper size and color of serving dish.
   b. Use skillful methods and a variety of arrangements for serving.

5. Any of the following are correct:
   a. Sugar
   b. Pepper
   c. Salt
   d. Crackers
   e. Cereal
   f. Milk
   g. Ice cream
   h. Catsup
   i. Mayonnaise

6. a. 4. Gelatin salad
   b. 3. Ice cream
   c. 1. Macaroni and cheese casserole
   d. 2. Meat
   e. 2. Meat
      5. Bread

f. 3. Ice cream
   6. Cereal

Answer Sheet
for
UNIT V-5

TECHNIQUES OF FOOD PREPARATION

SUBJECT: Work Simplification and Work Schedules

1. Plan and organize for work to be done.
   Plan the job itself.

2. The job of making work easier to do in a shorter period of time.

3. a. Take job apart, see how it is done.
   b. See how methods can be changed, eliminated, combined or rearranged.
   c. Plan the job, avoiding unnecessary waste.

4. No, an alert supervisor or food service employee may suggest ideas.

5. Physical and mental fatigue

6. Rest given to muscles between work motions
   Breaks after several hours work
   Rest between work shifts

7. Use your mental ability to find ways to use less energy.

8. Combine, rearrange, eliminate motions.

9. The finger makes a motion twice as fast as the hand, the hand three times faster than the arm, and the arm six times faster than the body. The simplest motion that can do the job is the most accurate and easiest to perform.

10. Work is done easily and quickly.

11. Get ready--set up equipment.
    Do--actual production.
    Put away and clean up.

12. a. Number 1 or 2. Left hand places lettuce; right hand places peach. Move arms simultaneously and in opposite and symmetrical directions.
    b. Number 3. Use touch of a finger.
    c. Number 5. Use a circular motion.
    d. Number 6. Use momentum or gravity to do work whenever possible.
    e. Number 8. Have tools, utensils, and materials within the normal or maximum reach area.

13. Gelatin salad would be prepared first because it needs time to set. The potato salad would probably be prepared second.

14. True

15. True

16. False

17. False

18. False

19. False

20. True

21. True

ASSIGNMENT: Analyze one job you do at your training station. What principles of motion economy could you apply to the job? (Turn this assignment in to your teacher.)

Answer Sheet
for
UNIT VI-1

TECHNIQUES OF FOOD PREPARATION

SUBJECT: Customer Satisfaction

NO STUDY QUESTIONS

ASSIGNMENT: Write at least a page describing ways in which you can help to insure customer satisfaction.

Answer Sheet
for
UNIT VI-2

FOOD PRODUCTION

SUBJECT: Preparation of Coffee and Tea

1. b. Twice weekly

2. a. After each use
   b. Twice weekly

3. a. After each use
   b. Twice weekly

4. b. Remove sizing.

5. a. Rinse in hot water.

6. b. Store in clean container with fresh cold water.

7. c. When undesirable odors persist

8. a. An urn cleaner and a stiff brush

9. c. Brush and hot water

10. a. Soaking all parts in a cleaner

11. b. Fresh cold water

12. a. Level standard measurements

13. c. Steady, circular motion

14. b. 185° F.

15. a. Dumped immediately after coffee is brewed

16. c. Improve flavor by giving a unified blend

17. a. Fresh, cold water

18. b. Rinsed in cold water

19. c. Top bowl of the vacuum coffee maker

20. a. Boiling

21. a. Heat

22. c. Reduce the heat

23. b. Vacuum created in the lower bowl

24. b. Removed

25. c. 185° F.

26. Cleanliness of the coffee maker is essential because the taste and flavor of coffee is affected by left-over coffee deposits.

27. If coffee is under brewed, it is watery in appearance and taste. Over brewing results in a bitter taste and a cloudy or muddy appearance.

28. a. Clear
    b. Mild in flavor
    c. Free from leaves

29. It becomes too strong.

30. Tea is made properly by pouring fresh boiling water over tea leaves and allowing the tea to steep for three to five minutes.

Answer Sheet
for
UNIT VI-3

FOOD PRODUCTION

SUBJECT: Bakery Ingredients

1. It furnishes structure and body to bakery products.

2. b. Wheat flour

3. a. Soft, winter wheat

4. a. Because of its ability to form a strong structure
   b. Because they produce a tender, more delicate structure

5. The part of flour which, when moistened, forms the framework of a baked product.

6. a. Fat
   c. Sugar
   d. Starch

7. It would slow it down.

8. a. Store at a temperature around 70° F. in a dry place where there are no odors.
   b. Provide good ventilation.
   c. Do not stack more than eight bags high.

9. a. Butter or margarine
   b. Animal fats
   c. Hydrogenated vegetable or hydrogenated animal fats or oils
   d. Blended compounds of vegetable and animal fats

10. Fats are used to give tenderness to the product and softness to the crumb.

11. It causes the product to rise and become light in texture. It develops texture, shape, and volume. It may increase the spread or reduce the viscosity of the batter or dough. It may tenderize or toughen proteins.

12. a. Air
    b. Steam
    c. Chemicals, such as baking powder and soda
    d. Yeast

13. a. Type of product
    b. Amount and method of creaming, mixing, or beating
    c. Type and quality of ingredient used
    d. Sequence of adding ingredients
    e. Altitude
    f. Technique of the operator

14. Low in volume; poor color; heavy, close grain, and a coarse crust

15. a. Air is incorporated.
    b. It gives an increase in volume and a light creamy texture to the mixture.

16. a. Sifting the flour
    c. Beating a batter or dough
    d. Manipulating a dough

17. b. Popovers
    c. Cream puffs
    e. Crackers
    f. Pie crust

18. a. (1) Soda
    (2) Baking powder
    (3) Baking ammonia
    b. Baking ammonia
    c. Baking powder

True or False

19. True

20. False

21. True

22. False

23. True

24. False

25. True

26. False

Home Economics
Instructional Materials Center
Lubbock, Texas

Answer Sheet
for
UNIT VI-4

FOOD PRODUCTION

SUBJECT: Quick Breads

1. b. Baking powder
   c. Soda

2. a. Mixes save labor and require less skill.
   b. Mixes can be used to produce a wider variety of items.

3. b. Crust is crisp, shiny, pebbly, and golden brown.
   d. Top is well rounded and free from knobs.
   e. Interior crumb is moist, light, and tender with no tunnels.

4. a. The crumb pulls away in layers.

5. a. Clear, even brown color
   d. Moist, slightly heavy texture
   e. Slightly crisp on the outside

6. Overstirring produces a tough muffin.

7. a. (1) Sift the dry ingredients well; repeat and sift into the mixer.
      (2) Blend egg, liquid shortening, and liquid thoroughly; pour into center of the dry mix.
      (3) Allow mixer paddle to stir ingredients at low speed for 15 to 20 seconds.
   b. The batter will be rough and lumpy. It will drop easily from the spoon.
   c. The muffin tins should be greased lightly.
   d. Dip the batter from the inside of the mixture toward the outside.
   e. After use the muffin tins should be cleaned with a soft, absorbent cloth.
   f. The muffins may have been soggy or overly moist.

8. a. (1) The solid shortening may be cut into the dry ingredients in the same manner as for making biscuits. The liquid and eggs are then added.
      (2) The shortening may be creamed with sugar, then the eggs, liquid, and flour added at one time. This mixture is blended only until it is well mixed.
   b. More shortening will be required in the ingredients.

9. a. Overmixing
   b. Mixing too slowly
   d. Too much flour
   e. Too much liquid
   f. Insufficient leavening
   g. Too low an oven temperature

10. 1. a, b, d, g, h, i
    2. a, h, j
    3. a, b
    4. e, k
    5. c, f

11. Blending well-sifted dry ingredients into the liquids

12. 2 ounces, 4 ounces

13. a. The color and the texture of the griddlecakes will be of poor quality.
    b. The griddlecakes will be too dark on the outside and may be undercooked on the inside.

14. b. Steam

15. Popovers may be pulled to the front of the oven and allowed to stand a few moments with the doors open so that the heat is reduced gradually.

16. True

17. False

18. True

19. True

20. False

21. False

22. True

23. False

24. False

25. True

ASSIGNMENT: If you are assigned to prepare quick breads, prepare a score card you can use to judge the products you make. If improvement needs to be made, try to figure out what caused the problem. Show your teacher the score card and discuss the quality of the products you prepare with her.

Answer Sheet
for
UNIT VI-5

FOOD PRODUCTION

SUBJECT: Yeast Breads

1. a. Volume
   b. Color of crust
   c. Symmetry of form
   d. Evenness of bake
   e. Character of crust
   f. Break (shred)
   g. Grain
   h. Color of crumb
   i. Texture
   j. Flavor

2. a. Tenderness
   c. Moderate thickness
   d. Uniformity

3. a. Size
   b. Shape
   c. Evenness of distribution
   d. Porosity of cellular structure

4. a. Flour
   b. Eggs
   c. Fat
   d. Liquid
   f. Yeast
   g. Salt

5. a. Bread or lean
   b. Sweet or rich

6. a. Contributes flavor
   b. Assists in developing fine cellular structure
   c. Strengthens the gluten
   d. Retards moisture absorption by the flour
   e. Gives whitness to the crumb

7. a. Sugar
   b. Sugar also gives flavor and improves the crust color

8. Yeast is a one-celled plant which grows by feeding upon glucose.

9. 7 Baking
3 Punching
5 Make-up
8 Cooling
1 Weighing and mixing
9 Storing
2 Fermentation
4 Benching and resting
6 Proofing

10. 1. b, Sponge
2. b, Sponge
3. c, No-time
4. b, Sponge
5. c, No-time
6. a, Straight
7. c, No-time
8. a, Straight
9. a, Straight--c, no-time
10. c, No-time

11. When there is a shortage of time

12. Add shortening to the liquid ingredients before adding it to the dry ingredients.

13. a. The dough ripens.
b. The dough completely hydrates and becomes pliable and elastic.
c. Dough becomes soft, smooth, and almost silky.

14. "Punching" the dough is folding the dough over from the side into the middle until most of the gas is expelled. The dough is then turned upside down in the fermentation container.

15. Allow dough to rest so that it may become relaxed and pliable for handling.

16. a. Rolls are divided into proper sizes, rounded, or molded and then panned.
b. Loaf bread is divided, scaled, rounded, given intermediate proof, molded, and panned.

17. b. The uncovered third is folded over half of the uncovered part.
d. The remaining covered third is then folded over the top, giving three layers of dough and two layers of shortening.

18. b. Open grain
d. Gray color to the crumb
e. Loss of flavor

19. a. 2, Excess dusting flour
    b. 1, Baked too long
    c. 3, Hard water
    d. 2, Lack of shortening
    e. 3, Cold oven
    f. 1, Overmixing

20. a. Wrap or place bread in moisture-vapor-proof containers if it is to be stored over eight to ten hours.
    b. Hard, crisp breads should be used as soon as possible and they should be baked daily.

21. a. Loss of aroma
    b. Increase in firmness and crumbliness
    c. Development of a harsh crumb texture

22. True

23. True

24. False

25. True

26. True

27. True

28. False

ASSIGNMENT: If you are assigned to prepare yeast breads, prepare a score card you can use to judge the breads you make. If improvement needs to be made, try to figure out what caused the problem. Show your teacher the score card and discuss the quality of the breads you make with her.

Answer Sheet
for
UNIT VI-6

FOOD PRODUCTION

SUBJECT: Pastries

1. a. Select wisely the types of pies to be prepared.
   b. Set up a convenient layout for work.
   c. Use good production techniques.

2. a. Tarts
   b. Dumplings

3. a. Puff paste
   b. Graham cracker
   c. Dark chocolate wafer
   d. Meringue

4. b. Crisp
   c. Tender
   e. Short, easily broken

5. The pie crust should be rough and blistery on the surface rather than smooth.

6. A starch-thickened filling will be delicate, smooth and soft, sagging only slightly at the cut edge.

7. a. 3, Shortening
   b. 2, Salt
   c. 4, Water
   d. 2, Salt
   e. 1, Flour
   f. 4, Water
   g. 3, Shortening

8. Milk

9. Pastry flour

10. Lard

11. a. Precise scaling
    b. Good ingredients
    c. Skillful techniques

12. a. 60° F.
    b. Too cold--crust will be tough
       Too warm--crust will not be flaky

13. a. 1, Mealy crust
    b. 3, Flaky crust
    c. 2, Semi-flaky crust
    d. 3, Flaky crust
    e. 1, Mealy crust
    f. 1, Mealy crust
    g. 2, Semi-flaky crust

14. Dough may be toughened.

15. a. Use quick strokes starting from the center and rolling toward the outer edge. Roll, do not force the dough out. Lift and turn dough as often as necessary, checking that there is enough flour to prevent crust from sticking.

16. Fold once in the center, place in pan without stretching, and unfold.

17. Docking is poking holes in the crust. It is required for single crust pie shells so they will not blister in baking.

18. Bake crust between pie pans

19. By carefully sealing around the edges. Moisten the edge of the bottom crust before adding the top to give a tight seal.

20. a. Butter
    c. Milk
    d. Cream
    e. Eggs
    g. Eggs and milk

21. Muffin pans

22. a. 425° F. to 450° F. for 15 minutes, then drop to 350° to 375° F.
    b. 425° F. to 450° F. for 10 minutes, then drop to 350° to 375° F.
    c. Bakers prefer straight baking at 350° F. to 375° F. for double crust pies.

23. a. Meringues
    b. Whipped cream
    c. Toasted coconut
    d. Crumbs
    e. Nuts

24. French or Dutch

25. a. Type of fruit
    b. Proper thickening agent
    c. Proportion of thickening agent
    d. Methods of preparation

26. Cornstarch and flour

27. Mix flour or cornstarch with a small amount of cold water in a cup and then gradually add to boiling fruit liquid. Cook and stir until desired thickness is reached.

28. A parfait pie filling is a gelatin dessert mixture into which soft ice cream and fresh or frozen drained fruits have been folded just before the gelatin sets.

29. a. To avoid crust soaking
    b. So filling will be cold and of such consistency that it can be spread in the pie and yet hold its shape when cut.

30. True

31. True

32. False

33. True

34. True

35. False

36. True

37. True

38. True

ASSIGNMENT: If you are assigned to prepare pastries, prepare a score card you can use to judge the pies you make. If improvement needs to be made, try to figure out what caused the problem. Show your teacher the score card and discuss the quality of the pies you make with her.

Answer Sheet
for
UNIT VI-7

FOOD PRODUCTION

SUBJECT: Desserts

1. a. 325°-340°F.
   b. The custard has a weak structure.
   c. So direct heat will not come in contact with the custard and cause syneresis
   d. Overcooking causes the custard to have a watery, open texture called syneresis.
   e. Baked custard is done when a knife inserted into the center comes out free of custard particles.

2. a. Starch puddings
   b. Steamed puddings

3. a. The fruit rolls are made by placing fruits in biscuit dough and rolling as for a cinnamon roll.
   b. A roly-poly is a fruit roll baked without slicing.
   c. Fruit dumplings are made by rolling a rich biscuit dough about 1/4 inch thick. The center is filled with fruit and sealed in. The dumpling is covered with a fruit sauce or slightly sweetened water and baked or steamed.

4. a. (1) Hard
      (2) Soft

   b. (1) As a base for desserts
      (2) As a topping for pies, puddings, etc.

5. a. Just before using
   b. Warm, cold
   c. Low, long
   d. 45° F.
   e. Extra fine
   f. Salt
   g. Lemon juice or vinegar
   h. Small, dissolve

6. a. Thin meringue, low volume, may weep, and have slippage

7. a. Leakage is moisture which separates or gathers as tiny droplets under the meringue.

   b. Leakage may result from
      1. excess moisture.
      2. improper beating.
      3. high sugar content.
      4. placing the unbaked meringue on too cold a filling before baking.

8. Rennet, warm

9. Jarring

10. Sugar, flavoring, and stabilizer

11. a. Storage
    b. Crystal size
    c. Overrun
    d. Ingredients

12. Small

13. 80%-100%

14. Milk fat

15. Improper service, temperature

16. 8, 12, 0

17. a. Texture
    b. Appearance
    c. Flavor

18. b. Omelets

19. a. Leavening

20. c. Minimum

21. Fritters are fried desserts made with fruits dipped in plain batter or diced fruits mixed with batter containing leavening agents.

22. a. Yeast, French

    b. Cake doughnuts: made from lean cake or rich muffin dough
       Yeast doughnuts: made from a sweet yeast dough
       French doughnuts: made from a rich eclair paste

    c. Bismarcks

23. a. Low cost
    b. Easily made
    c. Require small labor expenditure

24. Egg

25. a. 2
    b. 9
    c. 1
    d. 3
    e. 6
    f. 5
    g. 4
    h. 8
    i. 7

26. True

27. False

28. True

29. True

30 True

31. True

32. False

33. False

34. True

Answer Sheet
for
UNIT VI-8

FOOD PRODUCTION

SUBJECT: Salads

1. b. Cut ingredients into bite size pieces
   c. Arranged ingredients neatly

2. Salads are excellent sources of vitamins and minerals. They add variety, crispness, and flavor to the meal.

3. e. All of these

4. c. Chicken salad

5. b. Fruit

6. a. Colors are bright

7. c. Carrot-raisin salad

8. d. Body

9. B. French Dressing

10. C. Mayonnaise

11. B. French Dressing

12. A. Cooked Dressing

13. B. French Dressing

14. A. Cooked Dressing

15. Apples, bananas, peaches

16. Soaked in cold liquid for five minutes

17. Use finely crushed ice for part of the liquid.

18. As the mixture becomes sirupy--so they will be distributed throughout the salad.

19. Cover with a damp cloth.

20. Oil

ASSIGNMENT: Choose one of the salads served at your training station and do the following:

1. List the equipment required for preparation of the salad.
2. List the necessary ingredients.
3. Draw the work center and explain how the salads will be assembled in a quick and efficient manner.

Answer Sheet
for
UNIT VI-9

FOOD PRODUCTION

SUBJECT: Sandwiches

1. a. Something crisp, such as chopped celery, lettuce, cucumber
   b. One-third to one-half
   c. It should be possible to pick up the sandwich without it bending or losing filling.
   d. Fillings should not hang over the edge.

2. a. In their original wrappings in a dry place at 75° to 85° F.
   b. Unwrapped in a place where there is circulation of air
   c. Speeds up the staling process
   d. Retards staling
   e. No, it should be used for toast, grilled sandwiches, or French bread.

3. a. Using melted butter or margarine
   b. Blending milk or other moist items with the butter or margarine to soften it

4. "S"

5. a. Day-old, unsliced pullman loaves, which are sliced about 3/16 inch thick.
   b. Fresh bread
   c. One- or two-day-old bread

6. Put a light weight on the sandwich during grilling

7. a. In the refrigerator
   b. Two high; three high
   c. A moisture-vapor-proof wrap

8. $14.50

9. a, d, f

ASSIGNMENT: If you work in the sandwich area, write out the procedure you use. What can you do to improve your work methods? Refer to p. 111 and the illustrations on p. 112 in Kotschevar for suggestions. Time yourself with the methods you now use and then try the new plan you work out. Report the results of your experiment to your teacher.

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Answer Sheet
for
UNIT VI-10

FOOD PRODUCTION

SUBJECT: Vegetable Cookery

1. a. Flavor--neither bland nor strong, but natural, sweet, and pleasant
   b. Texture--slightly crisp
   c. Texture--soft throughout
   d. Form--distinct

2. a. 4. Green peas
   b. 2. Cabbage
      5. Turnips
   c. 3. Potatoes
   d. 1. Dried beans
      6. Rice

3. a. Retention of their delicate flavor
   b. Dilution of the flavor
   c. Cook the starch without losing other qualities
   d. Use of large quantities of water

4. The more mature vegetables and root vegetables (beets)
   Because they contain more cellulose

5. Shorten the time, because hard water contains alkali which softens the cellulose in vegetables

6. One tablespoon of salad oil per gallon of water

7. It would tend to break up the vegetables being cooked.

8. a. They might turn a brownish red or muddy color because of the reaction of the iron with the red pigment of the beets.
   b. No, because the yellow pigment, carotene, is stable to acid, alkali, and heat.
   c. Because the green pigment, chlorophyll, is easily destroyed by heat.

9. Nutrients are concentrated just under the skin of some vegetables.

10. c

11. a

12. b

13. a. Baking--high in starch
    b. Salads--moist and waxy potatoes
    c. Hash brown--moist and waxy potatoes
    d. Creamed--moist and waxy potatoes
    e. Boiled--moist and waxy potatoes
    f. Steamed--moist and waxy potatoes

14. a

15. c

16. a

17. Put vegetables in cold instead of boiling water
    Used too much water
    Left the cover off too long--it should have been put back on 3-5 minutes after the beans started boiling.

18. a. Uncovered
    b. Small
    c. Large
    d. Young

19. Steaming

20. Boiling

21. Press a grain against the side of the kettle. When it breaks easily and cleanly, it is.done.

22. They need to be well dried.

Answer Sheet
for
UNIT VI-11

FOOD PRODUCTION

SUBJECT: Meats and Entreé Foods

1. Collagen--is changed into gelatin and water by moist heat
   Elastin--is not changed by cooking
2. The temperature which is used
3. Low temperature; high temperatures are likely to toughen meat and increase shrinkage
4. a. Medium
   b. Rare
   c. Medium well
   d. Well
5. a. 170° F.
   b. 165°-175° F.
   c. 165° F.
   d. 140° F.
   e. 155° F.
6. 135°-145° F., because the internal temperature of large pieces of meat continues to rise after cooking
7. a. Solid roast
   b. Roast with bone removed
   c. Roast with a great deal of fat
8. Any three of the following:
   a. Good flavor
   b. Pleasing appearance
   c. Moist
   d. Tender
   e. Natural color
9. The tenderness of the meat
10. Polish with salt and oil, use pumice or soapstone until it shines, cool slowly, and wipe clean with a soft, absorbent cloth.
11. Hold the hand at cooking level and if the hand can be held there two seconds, it is a fast fire; three seconds, a medium fire; and four seconds, a slow fire.

12. Score (cut) the edges

13. Twice

14. Poured off as it accumulates

15. a. With the fat side up
    b. Insert fork in fatty tissues or merely roll with a fork
    c. In the center of the largest muscle

16. Cooking meat in a thin layer of fat

Answer Sheet
for
UNIT VI-12

FOOD PRODUCTION

SUBJECT: Deep-Frying

1. Because salt speeds up fat breakdown which results in rancid fat

2. a. High
   b. Shallow
   c. Food

3. a. 400° F.
   b. It reaches the smoking point, which indicates that the fat is breaking down

4. The temperature of the fat was too low.

5. Using fat at too high a temperature

6. a. Cook and brown uniformly
   b. Lowers the temperature of the fat too much
   c. Are in single layers and do not touch
   d. Room
   e. Carefully or slowly
   f. Food from sticking together
   g. Straining it through cheesecloth
   h. Kept clean

7. Flour, liquid, crumbs

8. A one-inch cube of soft bread dropped into the fat will turn a delicate brown
   in 1 minute and 15 seconds if fat is 350°-360° F.
   in 1 minute if fat is 360°-370° F.
   in 40 seconds if fat is 375°-385° F.
   in 20 seconds if fat is 385°-400° F.

9. Shake off loose crumbs or allow batter-dipped items to drain well.

10. a. 2, 5
    b. 1
    c. 3, 4
    d. 1, 4, 6

Answer Sheet
for
UNIT VI-13

FOOD PRODUCTION

SUBJECT: Convenience Foods

1. a. A shortage of regular food
2. b. Pre-prepared
3. a. Cooking
4. b. 15 minutes
5. d. The amount of food needed
6. a. Processed at the peak of nutritive value
7. c. During processing
8. b. Freezer and oven
9. c. Requires no inventory

ASSIGNMENT: Write a one page report on the convenience foods that are used in your training station. Identify the foods and describe the various ways in which they are used.

Answer Sheet
for
UNIT VII-1

FUNDAMENTALS OF BUS SERVICE

SUBJECT: What Is Bus Service?

1. Any example of unsanitary conditions in a food service operation, such as dirty tables, floors

2. b. Report it to the manager

3. Because it affects the kind of service which is given to the customer by the service host or hostess. Good bus service is necessary for a smooth food service operation.

4. Handle glasses at the base; pick up utensils by their handles; transfer food with utensils, not fingers. This helps prevent spreading of disease and contamination of food.

Answer Sheet
for
UNIT VIII-1

TABLE SERVICE TECHNIQUES

SUBJECT: Types of Service (Table, Cafeteria, Fountain)

1. a. In the kitchen
   b. Only when necessary
   c. On a bread and butter plate
   d. It is fast and inexpensive
   e. A minimum of training

2. All food is served from a guéridon.

3. A guéridon is a rolling cart the same height as the customer's table. It is covered with a cloth and placed next to the table. It is equipped with a small spirit stove which is used to keep the food warm and to prepare sauces.

4. Food is transferred to the customer's plate by spoon and fork. Silver is used extensively and very personal attention is given to the customer. The table arrangement is the same as French service.

5. Set empty plates in place from the customer's right, moving clockwise around the table. Serve food from the silver platter from the customer's left, moving counterclockwise around the table.

6. a. Customers are entitled to equal portions and to the same size portion every time they order a certain item.
   b. This aids in pricing the item.

7. Dip scoop in warm water.

8. Failure to drain scoop after dipping it in water and before dipping the ice cream.

9. a. Dip from side, not center, of container.
   b. Keep surface of ice cream level.
   c. Cut and lift ice cream instead of pressing down on it.

10. Maximum areation

11. Hold glass in tilted position, move it in a circular motion and direct the stream of carbonated water so it hits the side of the glass just above the syrup mixture.

12. Arrange the colors in a more attractive and harmonious manner.

13. Because a dirty counter and spilled food are not pleasing to the customer

14. The size portion to serve

15. So they can answer customers' questions accurately

Answer Sheet
for
UNIT VIII-2

TABLE SERVICE TECHNIQUES

SUBJECT: Hints on Meeting the Public

1. Courtesy
   (Student definition of courtesy)
2. Greet him with a smile.
3. a
4. a, c
5. Any three ideas for meeting the public the student intends to put into practice.

ASSIGNMENTS:

I. Rate your personality in terms of the traits listed on p. 7 in Harris.

Be honest in your evaluation. Select one or two areas in which you need improvement and keep a record of your experiences in trying to improve these traits.

II. Develop a check list that you can use to rate your appearance. Refer to Field, pp. 9-13 for ideas. After rating yourself and selecting areas in which improvement may be needed, discuss your appearance with your teacher.

Answer Sheet
for
UNIT VIII-3

TABLE SERVICE TECHNIQUES

SUBJECT: Procedures for Setting Tables

1. The space given to each customer
   The edge of the table

2. B

3. This increases customer safety and reduces chances that customer will knock silverware to the floor.

4. a. Right
   b. Right
   c. Left
   d. Right
   e Left
   f. Right
   g. Left

5. a. ~~Clean it~~ Clear
   b. Crumb it

ASSIGNMENT: Draw the table settings used at your training station.

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Answer Sheet
for
UNIT VIII-4

TABLE SERVICE TECHNIQUES

SUBJECT: Hints for Writing and Placing Orders

1. When he puts the menu down or gives a signal

2. Stand erect and at a reasonable distance from the table.

3. True

4. Mentally number the chairs at the table and always start with the person in the number one position.

5. a. How do you wish your meat? Well done, medium, or rare?
   b. What type of dressing do you wish on your salad? (Name the dressings available.)
   c. Would you prefer mashed, French fried, or baked potato? (or whatever is available.)
   d. What beverage do you prefer?
   e. If coffee, would you like it now or later?

6. Appetizers and soups, entrees, desserts, and beverages

7. Draw a line through the error and make the correction on the next line.

8. A menu on which items are separately priced and which is seldom changed

9. a. Large pieces of chilled crab meat garnished with lettuce and tomatoes and served with Thousand Island or Louis dressing or mayonnaise
   b. Pieces of lobster meat served in a sauce made of cream and thickened with egg yolks; sometimes flavored with sherry
   c. A dressing made from mayonnaise, chili sauce, onion juice
   d. Pieces of stewed chicken served in a thickened cream gravy
   e. Scalloped potatoes which have been topped with cheese and browned in the oven
   f. A sauce made of melted butter, egg yolks, and lemon juice
   g. A sundae with a peach and raspberry sauce

ASSIGNMENT: Examine the menu in the establishment where you work. Are there any foods you would have trouble explaining to a customer? Write out the definitions for these words.

Answer Sheet
for
UNIT VIII-5

TABLE SERVICE TECHNIQUES

SUBJECT: Serving the Food

1. From the left

2. When the customer is serving himself, present the serving dish on his left side, placing the silver on the right side with handles turned down toward the customer's side.

3. a. At the left of the forks
   b. In front of the customer

4. The cup and saucer is placed two inches from the edge of the table and at the right of the spoons with the handle at an angle toward the right of the customer.

5. By serving hot foods on heated dishes and cold foods on chilled dishes.

6. Last

7. Away

8. 4 a.
   1 b.
   3 c.
   2 d.
   5 e.
   7 f.
   6 g.
   8 h.

9. a. Center
   b. Placed on saucers
   c. Touch cold ones
   d. Evenly balanced

10. So the bone is at the top of the plate

Answer Sheet
for
UNIT VIII-6

TABLE SERVICE TECHNIQUES

SUBJECT: Presenting the Check

1. Place the check face down at the left of the customer after he has finished with the dessert.

2. a. Number of individual food item
   b. Price of food item
   c. Customer's choice, such as tea with lemon, porterhouse--rare, etc.
   d. Total
   e. Tax
   f. Total amount including tax
   g. Number of guests
   h. Table number
   i. Number of server

Answer Sheet
for
UNIT VIII-7

TABLE SERVICE TECHNIQUES

SUBJECT: Table Arrangements for Parties

1. Overcrowded

2. a. V-shapes
   b. U-shapes
   c. Zig-zags
   d. Hollow squares

3. The long table arrangement

4. a. Round
   b. Oval
   c. Oblong
   d. Serpentine
   e. Half-round
   f. Quarter-round

5. Food service

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Answer Sheet
for
UNIT IX-1

PROCEDURES FOR RECEIVING AND STORING FOODS

SUBJECT: Receiving Records

1. Receiving clerk

2. a. Accuracy, some knowledge of food, trustworthy, mentally alert.
   b. The answer should point out that Jody has the basic qualities for becoming a receiving clerk. Although he is not particularly interested in record keeping, he may develop an interest when he knows more about the job.

3. a. Manager

4. The conventional method: The receiving clerk is notified of the orders to be received.

   The "blind" method: The receiving clerk is not notified of the order.

5. a. Name of vendor
   b. Date received
   c. Description of items
   d. Quantities or weights received

6. a. Kept daily

7.

RECEIVING REPORT

No. ______
Date. Sept. 1 19--

Received from A & B Food Products Company

Anytown, Texas

QUANTITY	UNIT	DESCRIPTION
12	lb	Ground black pepper
60	doz.	Lg. Eggs
400	lb	All purpose flour
36	cans	Sliced apples
100	lb	Irish potatoes
50	lb	onions

8. c. Check with the food service supervisor to determine the proper procedure before accepting the delivery.

Possible reasons are: (1) some action might need to be taken before the bread delivery is accepted, (2) the food service supervisor or other person in charge of checking the items for quality should be notified when the delivery is inferior, and (3) it is not Betty's responsibility to notify the supplier.

Answer Sheet
for
UNIT IX-2

PROCEDURES FOR RECEIVING AND STORING FOODS

SUBJECT: Storage of Food and Supplies

1. a. Dry food storage area
   b. Supply storeroom
   c. Walk-in refrigerator
   d. Reach-in refrigerators and freezers

2. Dry storeroom

3. Under refrigeration

4. Supply storeroom

5. Reach-in refrigerators and freezers

6. c. 50° to 55° F.

7. True

8. False

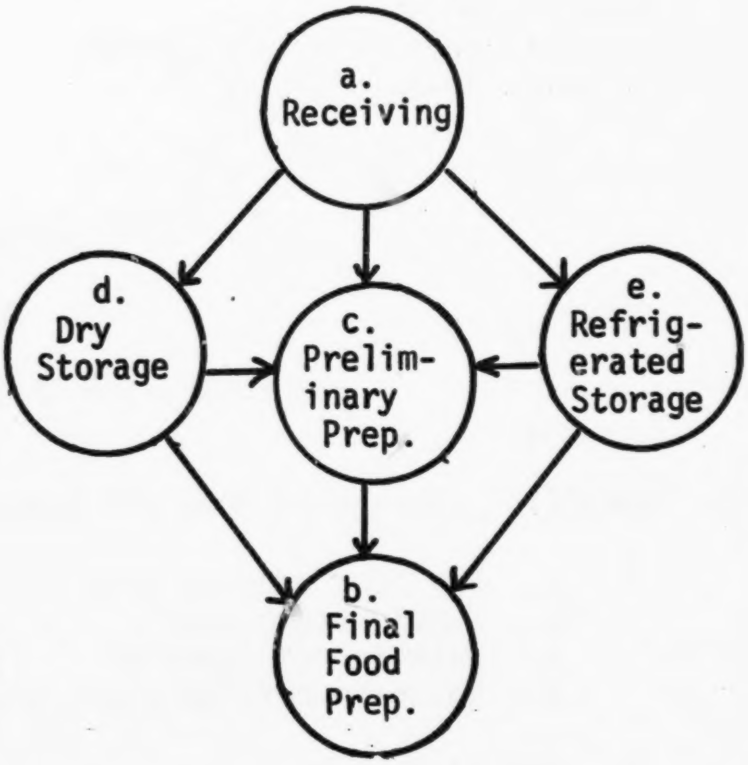
9. False

10. 1. c
    2. a
    3. f
    4. g
    5. d

11. Answer should emphasize the following:

    1. Dry storeroom should be dry and cool.
    2. Dry storeroom should be kept clean and free from rodents and bacteria.
    3. Food should be arranged so that "first in" items will be used first.
    4. Storeroom should be locked to prevent pilferage.

12.



13. End of each month accounting period

14. All items on hand, raw or cooked

15. Each unit is alloted a cost value, which multiplied by total number of units on hand gives the value.

16. It is assumed that the value of small amounts of leftover food will not be great and would remain fairly constant.

17. Total value of food on hand at previous inventory period plus daily food purchases less present inventory on hand gives overall cost of food.

18. Prepare typed sheets listing items.
List items alphabetically.
Take inventory--usually two people work together with one checking stock and the other checking list.
Record items by location as stored, not as listed on sheet.

19. A permanent inventory record

20. a. Old stock should be used before the new.
c. Foods should be stored with space between to allow for air circulation.

UNIT TESTS

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I-1,2

UNIT I TEST

WHAT IS A FOOD SERVICE EMPLOYEE?

Select the letter of the phrase which correctly completes the statement. Choose only one answer for each item.

1. Self-evaluation is
    A. unnecessary if conferences are held with one's employer.
    B. recommended primarily for beginning employees.
    C. a means of improving work habits and attitudes.

2. The opportunities for trained personnel in the food service industry are
    A. slowly expanding.
    B. endless.
    C. limited.

3. Generally food service employees at the entry level are not expected to
    A. work primarily in and/or between the serving area and dishwashing section of the kitchen.
    B. assist in food preparation.
    C. make out orders for supplies.

4. Keeping the food service establishment clean and sanitary is the responsibility of
    A. all employees.
    B. the employers.
    C. the employees who are assigned cleaning duties.

Which of the types of behavior described in items 5 through 7 would lead to success as a food service employee?

Write A on your answer sheet if you would recommend the behavior.
Write B on your answer sheet if you would not recommend the behavior.

5. During the first week as assistant in the pastry department, Pat was enthusiastic about her work. As the weeks passed, her tasks became routine and she spent a lot of time chatting with the other employees to add interest to her job.

6. Mary does a good job in the salad department and can be depended upon to do the work assigned. When she does not agree with the directions she is given, she tells the supervisor how it should be done.

7. Jane's co-worker is rather slow so Jane sometimes helps her finish a job, even though this is not part of her assignment.

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II-1,2,3,4,5

UNIT II TEST

SANITATION

Select the letter of the phrase which correctly completes the statement. Choose only one answer for each item.

1. When using a dishwashing machine,
   A. it is unnecessary to scrape dishes before putting them through the machine.
   B. utensils (knives, forks, and spoons) should not be piled in layers in the machine baskets.
   C. the rinse water should be held between 150° and 170° F.

2. Dish towels should not be used for drying dishes because this practice
   A. increases costs.
   B. takes longer.
   C. is unsanitary.

3. A general rule to remember when storing perishable foods is to keep foods
   A. at temperatures that will prevent spoilage.
   B. at room temperature.
   C. in original containers.

4. Food poisoning is a general term used to describe
   A. diseases caused by foods.
   B. any food that has been exposed to moisture and warm temperature for several hours.
   C. any illness caused by taking contaminated food or drink into the body.

5. The three major "food germ criminals" are
   A. salmonella, bacteria, and ptomaine.
   B. botulism, salmonella, and staphylococcus.
   C. bacteria, botulism, and staphylococcus.

6. What harmful germ is usually found in meat, eggs, poultry, milk, and milk products?
   A. Salmonella
   B. Ptomaine
   C. Staphylococcus

7. The temperature range during which bacteria grow most rapidly is
   A. 20° - 40° F.
   B. 40° - 140° F.
   C. 140° - 180° F.

8. Which of the following foods becomes easily contaminated in a short period of time?
   A. Foods high in fat content
   B. Foods high in sugar content
   C. Foods high in protein content

9. At what temperatures must food be stored to halt or slow the growth of bacteria?
   A. Above 145° and below 40° F.
   B. Above 100° and below 0° F.
   C. Above 170° and below 50° F.

10. One of the main divisions of the U.S. Department of Health, Education, and Welfare which sets up model sanitation codes is the
    A. Texas Department of Health.
    B. Department of Agriculture.
    C. Food and Drug Administration.

11. Which of these is a goal of sanitation procedures in food service establishments?
    A. Prevention of food spoilage
    B. Preparation of high quality food
    C. Service of food at the proper temperatures

12. The term "sanitizing" differs from cleaning in that sanitizing indicates
    A. absence of soil.
    B. removal of harmful bacteria.
    C. use of a detergent.

13. Failure to clean equipment properly results in
    A. poor quality food products.
    B. improper functioning of equipment.
    C. both A and B.

14. When cleaning concrete floors, it is recommended that
    A. steel wool and a cleaning solution be used to remove heavy soil.
    B. a solution of neutral soap suds be used to scrub the floor.
    C. an oil mop be used for sweeping the floor.

15. Which of the following would be least important when cleaning tables and chairs?
    A. Check for remaining sticky spots on the table.
    B. Wipe tables daily with a cloth dipped in sanitizing solution.
    C. Polish the chairs and tables once a week.

Which of the practices in items 16 through 23 might lead to food contamination or poisoning?

> Write A on your answer sheet if the practice is safe.
> Write B on your answer sheet if the practice is to be avoided.

16. Susan reported to work even though she had a deep cough, since the number of employees at her training station was limited.

17. Sarah used her hands to put the rolls on the serving tray.

18. Betty held the glasses near the bottom as she filled them.

19. Jill had just had her hair shampooed and set, so she did not wear her cap that afternoon.

20. After using a spoon for tasting the pie filling, Thelma put the spoon in the sink.

21. Kay made the chicken salad and stored it in the refrigerator until just before serving time.

22. Sally served some left-over custard which had been stored in a warm place for several hours.

23. After Sam cut his finger, he washed his hands with soap and water and went back to work.

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UNIT III TEST

SAFETY PRECAUTIONS

Select the letter of the phrase which correctly completes the statement. Choose only one answer for each item.

1. Which of the following statements about safety is true?
    A. All accidents could be eliminated.
    B. Accidents due to unsafe conditions could be eliminated.
    C. Accidents due to unsafe acts could be eliminated.

Would each of the types of accidents described in items 2 through 7, be caused by unsafe acts or unsafe conditions?

> Write A on your answer sheet if the accident is a result of unsafe acts.
> Write B on your answer sheet if the accident is a result of unsafe conditions.

2. Mary received a shock when she touched an electrical cord before drying her hands.
3. Betty cut her hand on a paring knife while washing dishes in the sink.
4. The rung of a stepladder broke when Joe was reaching for some canned food in the storeroom.
5. Jill slipped and fell on some spilled food behind the cafeteria counter.
6. Sally was burned when she hit the handle of a pan which was turned toward the outside of the range.
7. Kay was burned when steam escaped from a leak in the steam table.

Write the letter of the kind of fire extinguisher you would use for the types of fires listed in items 8 through 10.

TYPES OF FIRES

8. Paper
9. Electrical
10. Cleaning rags

FIRE EXTINGUISHERS

A. Soda-Acid
B. Carbon-Dioxide

UNIT IV TEST - PART I

COMMERCIAL KITCHEN EQUIPMENT

Select the letter of the phrase which correctly completes the statement. Choose only one answer for each item.

1. Which of the following steps for operating a meat slicer is the first step?
   A. Start the motor.
   B. Adjust the indicator.
   C. Slice the food.

2. When operating a meat slicer, one should
   A. remove the blade guard before starting the machine.
   B. use a metal instrument to scrape off food particles.
   C. use warm water when cleaning the slicer.

3. The speed of the mixer is controlled by the
   A. gear control.
   B. off and on switch.
   C. wall socket.

4. At what speed should the electric mixer be set for beating egg whites or whipping cream?
   A. 1 (low)
   B. 2 (intermediate)
   C. 3 (high)

5. When changing the speed of a gear-driven electric mixer,
   A. the clutch lever should be put into neutral before changing speeds.
   B. the machine should be turned off before changing speeds.
   C. simply move the gear to the desired speed.

6. For best results, the mixer bowl should be filled
   A. 1/4 to 1/2 full.
   B. 1/2 to 2/3 full.
   C. 2/3 to 3/4 full.

7. As a safety precaution during the mixing process, what should be done before using a spatula to scrape the sides of the mixer bowl?
   A. Reduce the speed of the mixer and lower the bowl.
   B. Lower the bowl and tip the bowl forward.
   C. Stop the mixer and lower the bowl.

8. What temperature should the water be for rinsing egg mixtures or flour batters from the beaters?
   A. Lukewarm
   B. Cold
   C. Hot

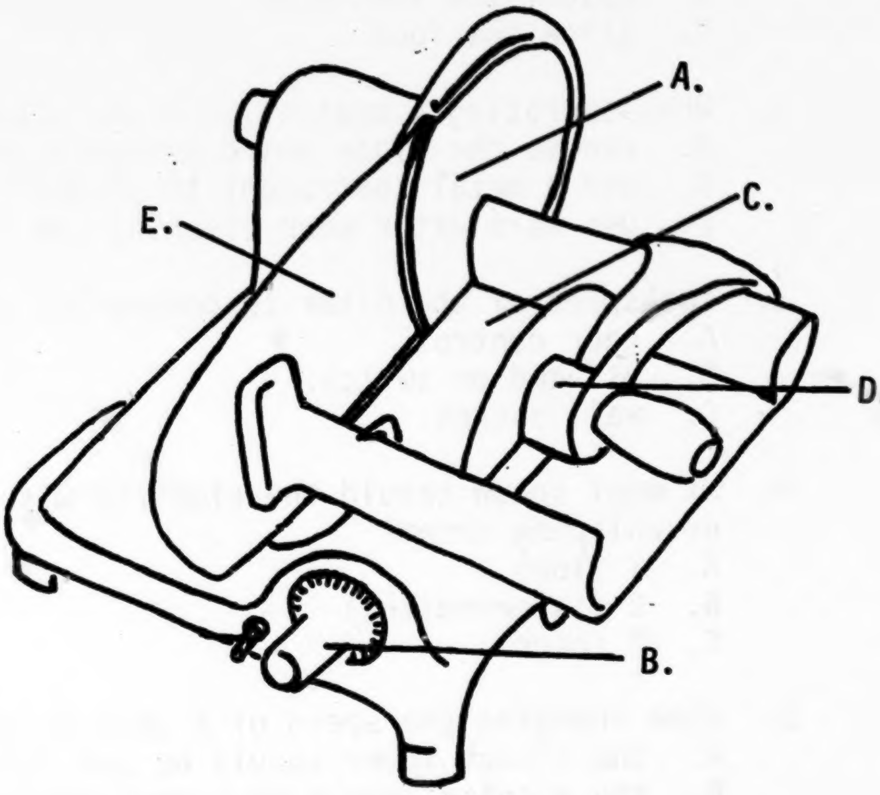
9. Food should be forced through the vegetable hopper by using
   A. the cover.
   B. the fingers.
   C. a pusher.

Write on your answer sheet the letter on the illustration which corresponds to the name of the part for items 10 through 13.

PARTS

10. Blade or slicer knife
11. Blade control indicator
12. Gauge plate
13. Food holder

MEAT SLICER



For items 14 through 17, read each purpose in the column on the left, and then select from the list of parts of the meat slicer the one which fits this purpose. Write the letter on your answer sheet.

PURPOSE

14. To tell the number of slices per pound
15. To push food against knife
16. To hold food while it is sliced
17. To regulate the thickness of the slice of food

PARTS OF THE MEAT SLICER

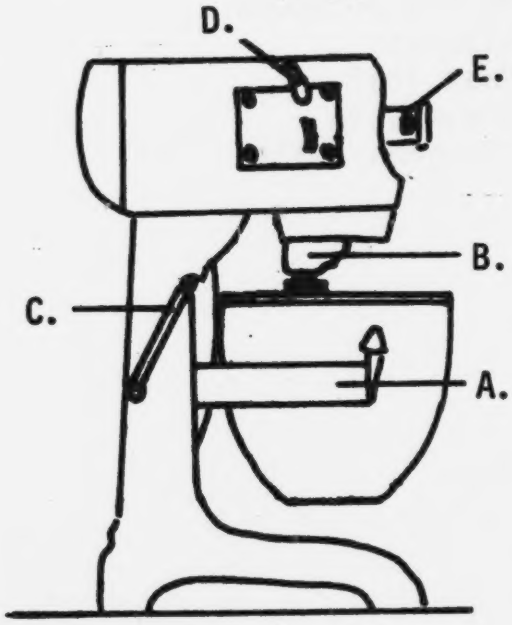
A. Gauge plate
B. Food holder
C. Food carriage
D. Receiving tray
E. Blade control indicator

For items 18 through 22, write the letter on the illustration of the food mixer which corresponds to the name of the part.

PARTS

18. Bowl support
19. Bowl raising wheel or lever
20. Gear or speed control
21. Beater shaft
22. Attachment socket

FOOD MIXER



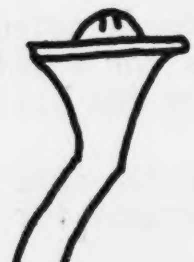
Four general types of mixing are done with the electric food mixer. For items 23 through 26, write the letter of the beater which is used for each type of mixing.

TYPES OF MIXING

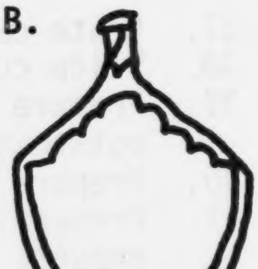
23. Incorporates air into product
24. Does general mixing
25. Mixes heavy doughs
26. Combines flour and shortening

BEATERS

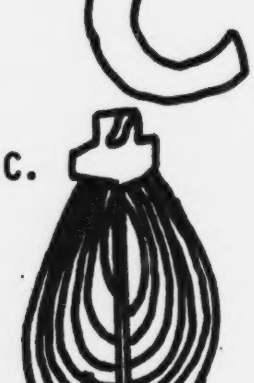
A.



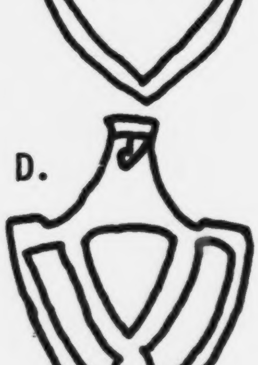
B.



C.



D.



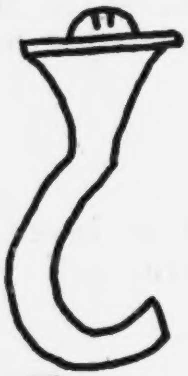
During the week Mary has used the mixer for each of the following foods. Write on your answer sheet the letter of the beater she should have used for each food listed in items 27 through 36.

FOODS

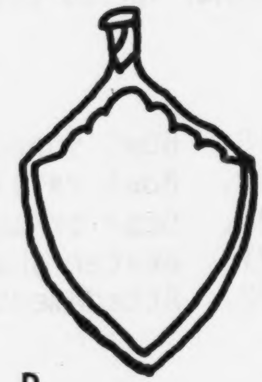
27. Chocolate cake
28. Meringue
29. Yeast rolls
30. Pie crust
31. Blueberry muffins
32. Mashed potatoes
33. Biscuits
34. Meat loaf
35. Dream Whip
36. Cinnamon rolls

BEATERS

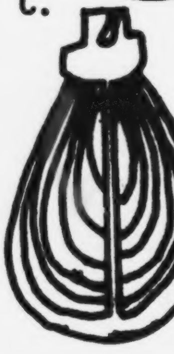
A.



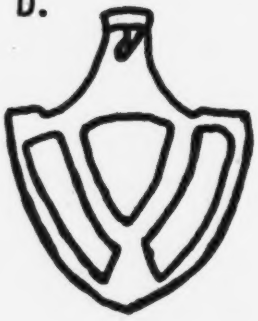
B.



C.



D.



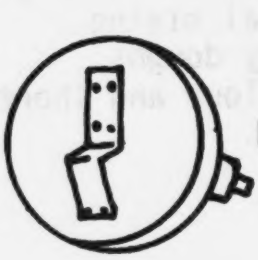
The three plates used with the vegetable hopper are shown below. Which plate should Mary use for each of the jobs she was assigned in items 37 through 41? Write on your answer sheet the letter of the plate which should be used.

JOBS

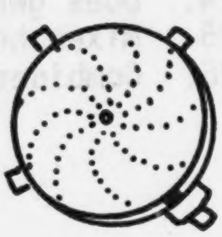
37. Grate carrots for a salad
38. Slice cucumbers for a salad
39. Prepare potatoes for scalloped potatoes
40. Prepare cabbage for cole slaw
41. Prepare bread crumbs for stuffed peppers

PLATES

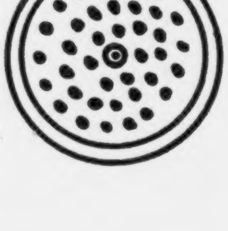
A.



B.



C.



UNIT IV TEST - PART II

COMMERCIAL KITCHEN EQUIPMENT

Select the letter of the phrase which correctly completes the statement. Choose only one answer for each item.

1. Food should be added to the food chopper
   A. all at once until the bowl is 1/2 full.
   B. in two additions until the bowl is 3/4 full.
   C. gradually until the bowl is 2/3 full.

2. To insure cutting food into uniform pieces in a food chopper,
   A. pre-cut food into pieces of the same size.
   B. scrape food down from the outer edge toward bottom of bowl.
   C. remove center portion of food as soon as it is chopped.

3. Food should be guided into the cutters of a food chopper with
   A. a spoon in the opposite direction the bowl is turning.
   B. a pusher in the same direction the bowl is turning.
   C. your hands in either direction.

4. Food should be removed from the chopper
   A. immediately after the "stop" button is pushed.
   B. two or three minutes after pushing the "stop" button.
   C. after pushing the "stop" button and removing the blades.

5. Which of the following is not true when cleaning a toaster?
   A. The cleaning compound or water should not touch the electrical element.
   B. The toaster should be disconnected before cleaning it.
   C. The outside of toasters should be wiped off with an oil-treated cloth.

6. A conveyor toaster should be
   A. plugged in when not in use.
   B. loaded without fingers touching the elements.
   C. cleaned once a week.

7. To insure maximum use of the refrigerator, containers should be stored
   A. as close together as possible.
   B. close to the cooling coils.
   C. so air can circulate around them.

8. The refrigerator should be defrosted when the frost is
   A. 1/8 inch thick on the coils.
   B. 1/4 inch thick on the coils.
   C. 1/2 inch thick on the coils.

9. The cold food server should be cleaned
   A. daily.
   B. twice a week.
   C. weekly.

10. The cold food server is used to
    A. chill foods as they are prepared.
    B. keep cold foods chilled during serving.
    C. store left-over food.

11. Water in the steam table tank should be kept at a temperature which will hold the food at a minimum of
    A. 120° F.
    B. 140° F.
    C. 160° F.

12. In order to prevent bacterial growth, the steam table should be cleaned
    A. immediately after service is completed.
    B. at the end of the day.
    C. twice a week.

13. Which of the following statements is not true about the steam table?
    A. The steam table helps prevent growth of bacteria.
    B. If the water reaches too high a temperature, the food is likely to become overcooked.
    C. When containers are placed in the steam table, they should not be covered.

14. The part of a dipper which measures the food is called the
    A. bowl.
    B. vane.
    C. lever.

15. Which of the following is not true in regard to cleaning a dipper?
    A. Wash in warm detergent water.
    B. Rinse in water with an added disinfectant.
    C. Dry with a towel.

16. What is the relationship between the number of servings and the number of the dipper size?
    A. The number of the dipper size equals the number of servings per quart.
    B. The number of the dipper size equals the number of servings per pint.
    C. The number of the dipper size equals the number of ounces per serving.

17. If you wanted twelve servings per quart, what size dipper would you use?
    A. #6
    B. #12
    C. #24

18. The primary purpose of the bain-marie is to
    A. keep food hot at the service counter.
    B. cook food to be served at the service counter.
    C. complete the cooking process of foods to be served at the service counter.

19. Which of these statements about the use of the bain-marie is correct?
    A. The steam switch should be turned on 15-20 minutes before adding the water.
    B. Water should be drained from the bain-marie at the end of each day.
    C. The water level should be such that the food containers do not float.

20. The "high" setting on electric and gas ranges should be used
    A. only until the food starts to cook.
    B. until the food is almost cooked.
    C. during the entire cooking time.

21. On gas ranges without pilots, the match should be lighted
    A. after turning on the burner valve.
    B. before turning on the burner valve.
    C. before turning the thermostat as high as possible.

22. Which of these steps should be performed first in the operation of a compartment steamer?
    A. Turn on the controls or switch.
    B. Pull the steam valves for each compartment.
    C. Close and lock the door.

23. How full should a vegetable peeler be to operate efficiently?
    A. 1/3
    B. 1/2
    C. 2/3

24. Overloading or underloading the vegetable peeler
    A. reduces the efficiency of the operation.
    B. damages the vegetable peeler.
    C. bruises the vegetables.

25. Garbage should be fed into a garbage disposal
    A. all at once before the water is turned on.
    B. gradually after the water is turned on.
    C. rapidly after the water is turned on.

26. After the grinding has stopped, the garbage disposal should be
    A. turned off immediately.
    B. run for one or two more minutes.
    C. run for at least five more minutes.

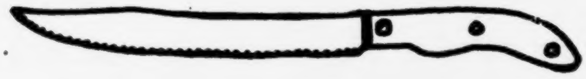
Write on your answer sheet the letter of the piece of equipment that should be used for each of the tasks listed in items 27 through 32.

TASK

27. Slicing a pound cake
28. Coring lettuce
29. Slicing ham
30. Paring apples
31. Chopping celery
32. Cutting sandwiches

EQUIPMENT

A.



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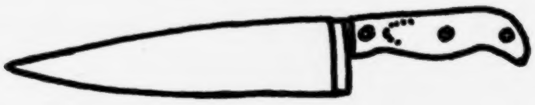

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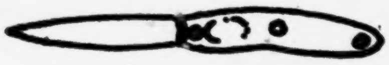
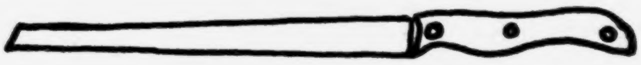


D.



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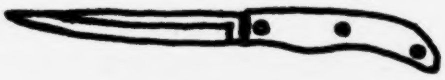


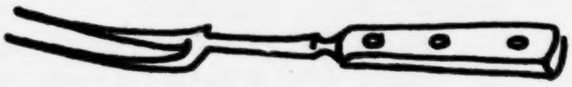
If you were assigned the following tasks, what piece of equipment would you use? Write on your answer sheet the letter of the piece of equipment to be used.

TASK

33. Scraping mixing bowls
34. Stirring white sauce
35. Leveling measurements
36. Turning a roast
37. Spreading ham salad sandwiches

EQUIPMENT

A.



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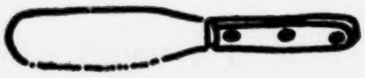
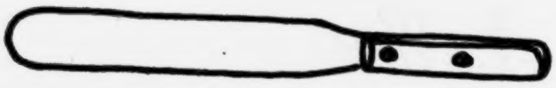


C.



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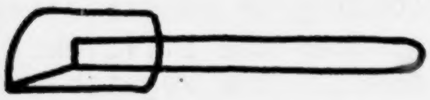
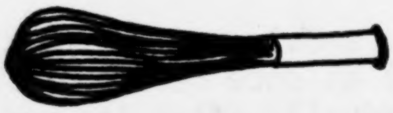


E.



Barbara was responsible for storing the supplies and utensils listed in items 38 through 44.

Write on your answer sheet the space of the letter of the equipment near which the supplies or utensils should be stored for maximum efficiency. For example, if potatoes should be stored near the food mixer, write A. Some pieces of equipment will be selected more than once.

SUPPLIES AND UTENSILS

38. Potatoes
39. Measuring cups
40. Detergents
41. Staple products
42. Bread baskets
43. Mixing bowls
44. Bowl guard

EQUIPMENT

A. Food Mixer
B. Food Chopper
C. Toasters
D. Vegetable Peeler
E. Dishwashing Machine

Home Economics
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Lubbock, Texas

V-1,2,3,4,5

UNIT V TEST

TECHNIQUES OF FOOD PREPARATION

Select the letter of the phrase which correctly completes the statement. Choose only one answer for each item.

1. Standard recipes are recommended for use in food service primarily because they
   A. insure that the product will be the same each time.
   B. reduce costs of the product.
   C. require less time to prepare.

2. Which one of the substitutions listed below is correct?
   A. 1 whole egg = 3 egg yolks
   B. 1 c. sour milk = 1 c. fresh milk plus 1 T. vinegar or lemon juice
   C. 1 sq. chocolate = 3 T. cocoa

3. Which of the following types of information is not included in a standard recipe?
   A. Length of cooking time
   B. Substitutions for ingredients not available
   C. Number of servings

4. Which of the following is incorrect?
   A. 3 t. = 1 T.
   B. 32 T. = 1 pt.
   C. f.g. = 1/8 t.

5. Betty was assigned to triple a recipe. She used the largest equivalent measures for the ingredients. What mistake did she make?
   A. She used 1-1/4 lbs. of sugar--the recipe called for 8 ozs.
   B. She used 1 T. and 1-1/2 t. of baking powder--the recipe called for 1-1/2 t.
   C. She used 1 pt. of liquid--the recipe called for 2/3 c.

6. The most accurate method of measuring one cup of milk would be to use
   A. a one cup, nested measuring cup.
   B. a glass measuring cup with a rim.
   C. a metal measuring cup with a rim.

7. In quantity food preparation, it is recommended that ingredients
   A. always be weighed because it is faster.
   B. always be measured because it is more accurate.
   C. be weighed when the amounts in the recipe are expressed in ounces or pounds.

8. When Jill's employer told her they were going to use work simplification techniques, he meant that they would need to
   - A. work faster to complete the job.
   - B. do the simplest part of the job first.
   - C. find the easiest way to do the job.

9. Which of the following is not a reason for portioning foods?
   - A. To provide leftovers which can be served later
   - B. To provide uniform servings of food
   - C. To provide for production of the appropriate amount of food

10. Which of the following is not a step in work simplification?
    - A. Analyze the job--observe how it is done.
    - B. Analyze the worker's attitude.
    - C. Plan the job, avoiding unnecessary waste.

In items 11 through 14, write on your answer sheet the letter of the definition of each term.

TERM

11. Dice
12. Mince
13. Julienne
14. Grate

DEFINITION

A. To pulverize
B. To cut into match-stick strips
C. To form tiny flakes
D. To cut into cubes
E. To cut into very small pieces

In items 15 through 18, write on your answer sheet the letter of the definition of each term.

TERM

15. Scald
16. Simmer
17. Blanch
18. Steam

DEFINITION

A. To cook with steam
B. To dip into boiling water for a specified time
C. To boil until partially cooked
D. To heat to a temperature of about 185° F.--bubbles break below surface
E. To heat to a temperature just below boiling

For items 19 through 22, write on your answer sheet the letter of the process which should be used to measure each ingredient. Some processes may be used more than once.

INGREDIENT

19. Confectioners' sugar
20. Flour
21. Vinegar
22. Shortening

PROCESS

A. Sift and spoon gently into cup
B. Pack firmly into cup
C. Read measurement at eye level

In items 23 through 26, write on your answer sheet the letter of the method of pre-portioning which could be used with each of the foods listed.

FOOD

23. Chocolate cake
24. Baked custard
25. Mashed potatoes
26. Cheese

METHOD OF PRE-PORTIONING

A. Standard size pan
B. Standard scoop or dipper
C. Individual baking dish
D. Individual carton
E. Standard slicer

If you were assigned the tasks in items 27 through 30, which principles of motion economy could be applied while doing each of them? Write on your answer sheet the letter of the principle which could be used with each task.

TASK

27. Filling soup bowls
28. Cleaning top of the range
29. Breading pork chops (dipping in flour, eggs, and then crackers)
30. Placing chopped celery in container

PRINCIPLE

A. Use curved motions with natural rhythm
B. Work hands in unison
C. Promote proper motion sequence by good location of tools and materials
D. Free hands and fingers by using devices, tools, or equipment
E. Use gravity to do work whenever possible

For questions 31 through 34, write on your answer sheet:
A if the statement is a principle of motion economy
B if the statement is not a principle of motion economy

31. Provide comfortable working heights.

32. Use music to cover up noise.

33. Allow rest periods.

34. Place equipment so levers and controls are in out-of-the-way positions to eliminate safety hazards.

Speed and accuracy are important factors in food preparation. Which of the following would help one to develop speed and accuracy?
If your answer is yes, write A on your answer sheet.
If your answer is no, write B on your answer sheet.

35. Read the recipe carefully before beginning.

36. Wait to measure ingredients until they are called for in the recipe.

37. Estimate the time required for preparation and cooking.

38. Check to see that all necessary equipment is available.

UNIT VI TEST - PART I

FOOD PRODUCTION

Select the letter of the phrase which correctly completes the statement. Choose only one answer for each item.

1. The bag or cloth filters used in coffee urns should be
   A. rinsed in a strong bleach after using.
   B. stored in a container of fresh cold water.
   C. replaced when they become stained.

2. Vacuum coffee pots should be cleaned
   A. twice a week by soaking all parts in a cleansing agent.
   B. after each use with an abrasive cleaner and a brush.
   C. once a week with bleach and hot water.

3. Boiling water should be poured over the grounds in a coffee urn with a
   A. quick, up and down motion.
   B. slow, back and forth motion.
   C. steady, circular motion.

4. What temperature water should be used to fill both coffee urns and vacuum coffee makers?
   A. Cold
   B. Lukewarm
   C. Hot

5. Coffee should be held at a temperature of
   A. 140° F.
   B. 165° F.
   C. 185° F.

6. When making coffee with a vacuum coffee maker,
   A. the water in the lower bowl should be boiling when the top is placed in the lower bowl.
   B. the filter should be removed when the water has been in contact with the coffee for the correct length of time.
   C. the upper bowl should be left in place after the coffee has returned to the lower bowl.

7. When tea is boiled, it becomes
   A. clear.
   B. mild in flavor.
   C. too strong.

8. Tea should be allowed to steep for
   A. 3-5 minutes.
   B. 8-10 minutes.
   C. 12-15 minutes.

9. Which of the following ingredients acts as a tenderizing agent in baked products?
   A. Flour
   B. Shortening
   C. Milk

10. The purpose of the leavening agent in a baked product is to
   A. form the structure.
   B. add moisture.
   C. increase volume.

11. Which of the following characteristics describes a high quality muffin?
   A. A pebbly, golden brown crust
   B. Moist interior crumb with few tunnels
   C. A smooth crust with low color

12. Muffins which are over-stirred are likely to be
   A. moist and soggy.
   B. tough.
   C. dry.

13. Biscuits that are heavy and compact may be the result of
   A. too much shortening.
   B. too little liquid.
   C. too much kneading.

14. Biscuits that are light, but not flaky, may be the result of
   A. rolling dough unevenly.
   B. cutting the shortening too finely into the flour.
   C. overkneading the dough.

15. Which of the following is not a leavening agent?
   A. Steam
   B. Baking powder
   C. Eggs

16. Which of the following is not a function of sugar in yeast breads?
   A. Improves crust color
   B. Strengthens the gluten
   C. Furnishes food for growth of yeast

17. When yeast breads are mixed using the straight dough method,
   A. many small bubbles develop when the dough is overmixed.
   B. the dough is mixed at high speed.
   C. 60% of the flour, all the liquid, and the yeast are mixed to form a thick batter.

18. Which of the methods of mixing yeast doughs produces bread of the lowest quality?
    A. Straight
    B. Sponge
    C. No-time

19. Allowing yeast dough to proof too long may result in bread with
    A. a closed grain.
    B. a tough crust.
    C. a loss of flavor.

20. Bread to be stored over 8-10 hours should be
    A. wrapped in waxed paper and stored in the refrigerator.
    B. wrapped or placed in moisture-proof containers.
    C. covered lightly and stored at room temperature.

21. A high quality pie crust should have
    A. a moist interior.
    B. a rough, blistery appearance.
    C. a smooth appearance.

22. A mealy crust is
    A. good to use for the undercrust.
    B. best suited for all purposes.
    C. good to use for tarts and top crusts.

23. Adding too much flour during the rolling of pastries may result in a pastry that is
    A. flaky.
    B. tough.
    C. crumbly.

24. When rolling out pastries, it is recommended that one roll the dough from
    A. the center to the edges.
    B. one edge to the opposite edge.
    C. the edges to the center.

25. Docking pie dough helps to prevent
    A. shrinkage.
    B. toughness.
    C. blisters during baking.

26. Single crust pies should be baked at
    A. 350° F. to 375° F. for the entire time.
    B. 425° F. for five minutes, then reduced to 300° F.
    C. 425° F. to 450° F. for fifteen minutes, then reduced to 350° F. to 375° F.

27. The procedure for adding the flour or cornstarch to the fruit liquid when making pie filling is to
   A. mix the flour or cornstarch with a small amount of cold water and then gradually add to the boiling fruit liquid.
   B. mix a small amount of the fruit liquid with the flour or cornstarch and then add to the rest of the liquid.
   C. stir the flour or cornstarch gradually into the cold fruit juice.

28. One way to help prevent soaking of the bottom crust of a single crust pie is to
   A. chill the pie before serving.
   B. wait until just before serving to add the filling.
   C. use additional cornstarch in the filling to make it thicker.

29. Pie crusts are usually rolled to a thickness of
   A. 1/8 inch.
   B. 1/4 inch.
   C. 1/2 inch.

30. Meringue should be added to the pie when the filling is
   A. hot.
   B. warm.
   C. cold.

31. Leakage of meringues may be caused by
   A. too little sugar.
   B. improper beating.
   C. too high an oven temperature.

32. When making a cream pudding,
   A. the mixture is brought to a boil after the eggs are added.
   B. a small amount of the starch-thickened mixture is added to the eggs.
   C. the cornstarch-milk mixture must be cooked for 20 minutes.

33. A baked custard is done when
   A. the sides of the custard pull away from the container.
   B. the top of the custard is a golden brown.
   C. a knife inserted into the center comes out free of custard particles.

UNIT VI TEST - PART II

FOOD PRODUCTION

Select the letter of the phrase which correctly completes the statement. Choose only one answer for each item.

1. Which of the following will not prevent discoloration of apples and bananas during salad preparation?
   A. Dip pieces in salad dressing.
   B. Dip pieces in lemon juice.
   C. Dip pieces in apple juice.

2. When arranging salads, a point to remember is to
   A. place ingredients in an orderly arrangement.
   B. serve ingredients whole or in large pieces.
   C. arrange lettuce leaves so they extend to the edge of the plate.

3. One of the first considerations in salad preparation is
   A. cleaning ingredients thoroughly.
   B. choosing the appropriate dressing.
   C. selecting the correct serving dish.

4. Which of these add color, flavor, and texture to the salad?
   A. Dressing
   B. Garnish
   C. Body

5. Which type of dressing needs to be shaken before it is added to a salad?
   A. Cooked
   B. Mayonnaise
   C. French

6. A fresh fruit which needs to be dipped in an acid fruit juice solution to prevent discoloration is
   A. pear.
   B. peach.
   C. apricot.

7. Fruits and vegetables are more likely to be distributed evenly in gelatin salads if they are added
   A. as soon as the gelatin has cooled to room temperature.
   B. as the gelatin is being prepared.
   C. when the mixture becomes sirupy in consistency.

8. According to Kotschevar, when putting an oil-vinegar dressing on a salad,
   A. the oil should be added first.
   B. the oil and vinegar should be added at the same time.
   C. the vinegar should be added first.

9. Vegetables with high-moisture content should be cooked
   A. until soft in texture.
   B. until they come to a boil.
   C. only until tender.

10. An example of a high-moisture, mild-flavor vegetable is
   A. green peas.
   B. cabbage.
   C. potatoes.

11. When cooking vegetables, the water or liquid to which they are added should be
   A. cold.
   B. warm.
   C. boiling.

12. Which of these practices would not cause loss of nutrients when preparing vegetables?
   A. Soaking vegetables to clean them
   B. Cooking in small amount of water
   C. Deep peeling of vegetables

13. Soft-crusted bread should be stored
   A. unwrapped in an airtight container.
   B. in the original wrapper in a dry place.
   C. unwrapped in an area where there is circulation of air.

14. Soaked or soggy sandwiches can be prevented by
   A. using melted butter or margarine.
   B. using soft butter or margarine.
   C. using butter or margarine softened by the addition of milk.

15. A recommended motion to use when spreading fillings on sandwiches is
   A. an "S" movement.
   B. a "U" movement.
   C. an "O" movement.

16. When cooking meat, the factor having the greatest affect on the amount of shrinkage which will occur is the
   A. method of cooking selected.
   B. temperature used for cooking.
   C. amount of connective tissue in the meat.

17. A piece of cooked meat which has no pink color, has clear or gray juices, is somewhat juicy, and is firm to the touch is
   A. rare.
   B. medium.
   C. medium well.

18. Roasts which are to be cooked to the rare or medium stage should be removed from the oven when the internal temperature of the meat is
    - A. 15-25° F. below the temperature specified for rare or medium meat.
    - B. at the temperature specified for rare or medium meat.
    - C. 15-25° F. above the temperature specified for rare or medium meat.

19. Meat is more tender and juicy when it is cooked at
    - A. low temperatures.
    - B. medium temperatures.
    - C. high temperatures.

20. A roast with the bone removed would take
    - A. less time to cook than one with the bone.
    - B. the same time to cook as one with the bone.
    - C. more time to cook than one with the bone.

21. The most important factor to consider when choosing the method of meat cookery to use is the
    - A. amount of fat in the piece of meat.
    - B. size of the piece of meat.
    - C. degree of tenderness of the meat.

22. Griddles should be cleaned with
    - A. detergent and water.
    - B. scouring pads.
    - C. salt and oil.

23. To prevent the edges of steaks from curling up, one can
    - A. trim the steak.
    - B. cut the edges in several places.
    - C. place a weight on the steak.

24. Deep-fried foods that are soggy, greasy, and light in color were cooked in fat at
    - A. too low a temperature.
    - B. the right temperature.
    - C. too high a temperature.

25. Which of the following practices would be recommended when deep-frying foods?
    - A. Fill the fry basket full to increase production.
    - B. Place breaded foods close together to save space.
    - C. Allow foods to reach room temperature before frying to shorten cooking time.

26. After fat has been used for deep-frying, it should be
    A. strained.
    B. discarded.
    C. refrigerated.

27. Fat that bubbles over when deep-frying may be the result of
    A. using a frying temperature that is too low.
    B. failing to drain foods properly.
    C. placing cold foods in the fat.

28. One reason for fat starting to smoke during deep-frying is
    A. failure to strain fat.
    B. too much food in basket.
    C. temperature of fat is too low.

29. The quality of convenience foods
    A. is usually consistent.
    B. varies from one time to the next.
    C. is inferior to items prepared from "scratch".

30. The higher cost of convenience foods is balanced by cost reductions in all but one of the following. Which one does not help to balance this cost?
    A. The amount of food needed
    B. The amount of labor needed
    C. The amount of equipment needed

For items 31 through 34, fill in the space of the letter of the main concern when cooking each of these types of vegetables.

TYPES OF VEGETABLES

31. High-moisture, mild-flavor
32. High-moisture, strong-flavor
33. Moist, starchy
34. Dry, starchy

CONCERN

A. Preserve the delicate flavor
B. Cook the starch without losing other qualities
C. Dilute the flavor
D. Use large quantities of water
E. Keep the strong flavor

UNIT VII TEST

FUNDAMENTALS OF BUS SERVICE

Select the letter of the phrase which correctly completes the statement. Choose only one answer for each item.

1. Which of these factors would most likely discourage customers from returning to a food service establishment?
   A. Unsanitary conditions
   B. Slow service
   C. Lack of atmosphere

For items 2 through 5, on your answer sheet write
A if the statement is true.
B if the statement is false.

2. When complaints are heard about the food, they should be reported to the cook.

3. The quality of the bus service has little effect on the overall operation of a food service establishment.

4. When clearing tables, the glasses and dishes should be placed in separate containers.

5. Clearing tables quietly is as important as clearing them rapidly.

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Lubbock, Texas

VIII-1,2,3
4,5,6,7

UNIT VIII TEST

TABLE SERVICE TECHNIQUES

Select the letter of the phrase which correctly completes the statement. Choose only one answer for each item.

1. When American-type service is used,
   A. the plates are served in the kitchen.
   B. the food is served from a gueridon.
   C. the waiter serves the food at the table.

2. American-type service
   A. is more expensive than other types of service.
   B. requires a minimum number of waiters or waitresses.
   C. takes more training than other types of service.

3. The customer's order should be taken
   A. five minutes after the customer is seated.
   B. as soon as the customer is seated.
   C. when the customer puts the menu down.

4. Which item should be listed first on the check when taking a customer's order?
   A. Entree
   B. Appetizer or soup
   C. Beverage

5. A waitress should
   A. take the order from the customer's right.
   B. not ask too many questions when taking orders.
   C. remember what each customer ordered.

6. The most accepted and logical method for serving the dinner plate is to serve from
   A. the customer's left with the waitress's left hand.
   B. The customer's right with the waitress's right hand.
   C. the customer's right with the waitress's left hand.

7. Beverages should be served and removed from
   A. the customer's right or left (either is all right).
   B. the customer's left.
   C. the customer's right.

8. When a customer is serving himself, the serving dish should be offered
   A. to his left.
   B. to his right.
   C. to his left or right (either is all right).

9. One of the most important traits one can posses in the food service industry is
   A. self-confidence.
   B. courtesy.
   C. efficiency.

10. When the salad is served as a separate course, it is placed
   A. to the customer's left.
   B. to the customer's right.
   C. in front of the customer.

11. The check should be presented to the customer when
   A. the dessert is served.
   B. he has finished his dessert.
   C. he asks for it.

12. Which of the following kinds of information is not usually included on the customer's check?
   A. The date
   B. The number of food items
   C. Number of the person serving the food

13. Which table arrangement for parties should be avoided when possible?
   A. The U-shape
   B. The long table
   C. Hollow squares

14. When dipping ice cream, one should dip from
   A. the center of the container.
   B. the edge of the container.
   C. either the center or the edge of the container.

15. Which of the following is not true about cafeteria style service?
   A. Foods should be arranged in a neat, orderly manner.
   B. The color of the food should be considered when putting it in place on the cafeteria line.
   C. Food spills should be cleaned up when serving is completed.

16. The term "set line," in relation to table settings, means
   A. the edge of the table.
   B. a position 1/2 inch from the edge of the table.
   C. a position 1 inch from the edge of the table.

Where are the items listed in 17 through 21 generally placed when setting a table for dinner?

Write A on your answer sheet if the item is usually on the left.
Write B on your answer sheet if the item is usually on the right.

17. Teaspoon

18. Salad plate

19. Water glass

20. Knife

21. Dinner fork

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IX-1,2

UNIT IX TEST

PROCEDURES FOR RECEIVING AND STORING FOOD

Select the letter of the phrase which correctly completes the statement. Choose only one answer for each item.

1. The person who is usually responsible for checking to see that the correct quantity of goods has been delivered is
   A. the manager.
   B. the cook's helper.
   C. the receiving clerk.

2. Receiving records must contain the
   A. date of the order.
   B. quantities or weights received.
   C. price of items delivered.

3. When poor quality or an incorrect quantity of goods is delivered, the receiving clerk should
   A. contact the company delivering the order.
   B. report it to the manager.
   C. check with the food service supervisor.

4. When the conventional method of receiving foods and supplies is used, the receiving clerk
   A. has been notified of the orders to be received.
   B. has not ~~be~~ been notified of the orders to be received.
   C. makes out the orders for goods to be received.

5. Canned goods should be stored at a temperature of
   A. 45° to 50° F.
   B. 50° to 55° F.
   C. 55° to 60° F.

6. One purpose of taking inventory is to
   A. aid in determining food costs.
   B. be sure to have extra food on hand.
   C. check the quality of goods on hand.

7. Which of the following is not true about storing foods?
   A. Place new stock in front of the old stock.
   B. Place foods in walk-in refrigerator close together.
   C. Cross-stack cartons of eggs.

Write on your answer sheet the letter of the storage method which should be used for each of the products in items 8 through 12.

PRODUCTS

8. Canned goods
9. Frozen pastries
10. Fresh fruits
11. Cleaning supplies
12. Paper goods

STORAGE METHOD

A. Refrigerated area
B. Dry storeroom
C. Supply storeroom
D. Freezer

ANSWER KEYS
FOR
UNIT TESTS

Answer Key
for
UNIT I TEST

WHAT IS A FOOD SERVICE EMPLOYEE?

1. C
2. B
3. C
4. A
5. B
6. B
7. A

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II-1,2,3,4,5

Answer Key
for
UNIT II TEST

SANITATION

1. B
2. C
3. A
4. C
5. B
6. A
7. B
8. C
9. A
10. C
11. A
12. B
13. C
14. B
15. C
16. B
17. B
18. A
19. B
20. A
21. A
22. B
23. B

Answer Key
for
UNIT III TEST

SAFETY PRECAUTIONS

1. B
2. A
3. A
4. B
5. B
6. A
7. B
8. A
9. B
10. A

Answer Key
for
UNIT IV TEST - PART I

COMMERCIAL KITCHEN EQUIPMENT

1. B
2. C
3. A
4. C
5. A
6. B
7. C
8. B
9. A
10. A
11. B
12. E
13. D
14. E
15. B
16. C
17. A
18. A
19. C
20. D
21. B
22. E
23. C
24. D
25. A
26. B
27. D
28. C
29. A
30. B
31. D
32. D
33. B
34. D
35. C
36. A
37. B
38. A
39. A
40. C
41. B

Answer Key
for
UNIT IV TEST - PART II

COMMERCIAL KITCHEN EQUIPMENT

1. C
2. B
3. A
4. B
5. C
6. B
7. C
8. B
9. A
10. B
11. B
12. A
13. C
14. A
15. C
16. A
17. B
18. A
19. C
20. A
21. B
22. C
23. C
24. A
25. B
26. C
27. A
28. E
29. D
30. C
31. B
32. D
33. D
34. E
35. C
36. A
37. B
38. D
39. A
40. E
41. A
42. C
43. A
44. B

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V-1,2,3,4,5

Answer Key
for
UNIT V TEST

TECHNIQUES OF FOOD PREPARATION

1. A
2. B
3. B
4. C
5. A
6. B
7. C
8. C
9. A
10. B
11. D
12. E
13. B
14. C
15. D
16. E
17. B
18. A
19. A
20. A
21. C
22. B
23. A
24. C
25. B
26. E
27. B
28. A
29. C
30. E
31. A
32. B
33. A
34. B
35. A
36. B
37. A
38. A

Answer Key
for
UNIT VI TEST - PART I

FOOD PRODUCTION

1. B
2. A
3. C
4. A
5. C
6. A
7. C
8. A
9. B
10. C
11. A
12. B
13. C
14. B
15. C
16. B
17. A
18. C
19. C
20. B
21. B
22. A
23. B
24. A
25. C
26. C
27. A
28. B
29. A
30. B
31. B
32. B
33. C

Answer Key
for
UNIT VI TEST - PART II

FOOD PRODUCTION

1.	C
2.	A
3.	A
4.	B
5.	C
6.	B
7.	C
8.	A
9.	C
10.	A
11.	C
12.	B
13.	B
14.	B
15.	A
16.	B
17.	C
18.	A
19.	A
20.	C
21.	C
22.	C
23.	B
24.	A
25.	C
26.	A
27.	B
28.	A
29.	A
30.	A
31.	A
32.	C
33.	B
34.	D

Answer Key
for
UNIT VII TEST

FUNDAMENTALS OF BUS SERVICE

1. A
2. B
3. B
4. A
5. A

Answer Key
for
UNIT VIII TEST

TABLE SERVICE TECHNIQUES

1. A
2. B
3. C
4. B
5. C
6. A
7. C
8. A
9. B
10. C
11. B
12. A
13. B
14. B
15. C
16. C
17. B
18. A
19. B
20. B
21. A

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Answer Key
for
UNIT IX TEST

PROCEDURES FOR RECEIVING AND STORING FOOD

1. C
2. B
3. C
4. A
5. B
6. A
7. B
8. B
9. D
10. A
11. C
12. C

REFERENCES REQUIRED
FOR USE WITH
INSTRUCTIONAL MATERIALS

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REFERENCES REQUIRED FOR USE WITH INSTRUCTIONAL MATERIALS

BOOKS

Harris, Ellen. *Professional Restaurant Service.* New York, New York: McGraw-Hill Book Company, Inc. 1966.

Kotschevar, Lendal H. *Quantity Food Production.* Berkeley, California: McCutchan Publishing Corporation. 1966.

Stokes, John W. *Food Service in Industry and Institutions.* Dubuque, Iowa: William C. Brown Company. 1960.

PAMPHLETS

Field, David W. *Cinda Service Speaks Out about Your Career as a Sales Hostess.* Columbus, Ohio: The Ohio State Restaurant Association. 1968.

_________. *Here's How!* New York, New York: Plate, Cup, and Container Institute, Inc.

_________. *Preventing Food-Borne Diseases.* Austin, Texas: Texas State Department of Health. 1966.

SUPPLEMENTARY REFERENCES

BOOKS

Pollard, Belle. *Experiences with Foods.* Boston, Massachusetts: Ginn and Company. 1960.

PAMPHLETS

_________. *Problem Solving.* Denver, Colorado: American School Food Service Association. 1968.

Tigner, Nancy C. and Knickrehn, Marie L. *A French Knife Speeds Food Preparation.* Ithaca, New York: Cornell University Extension Services. 1963.

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REFERENCES REQUIRED FOR USE WITH INSTRUCTIONAL MATERIALS FOR FOOD SERVICE EMPLOYEE

UNITS

	I	II	III	IV	V	VI	VII	VIII	IX
BOOKS: Harris. *Professional Restaurant Service.*								X	
Kotschevar. *Quantity Food Production*		X			X	X			
Stokes. *Food Service in Industry and Institutions.*		X	X						X
PAMPHLETS: Field. *Cinda Service Speaks Out about Your Career as a Sales Hostess.*								X	
Here's How!		X							
Preventing Food-Borne Diseases.		X							